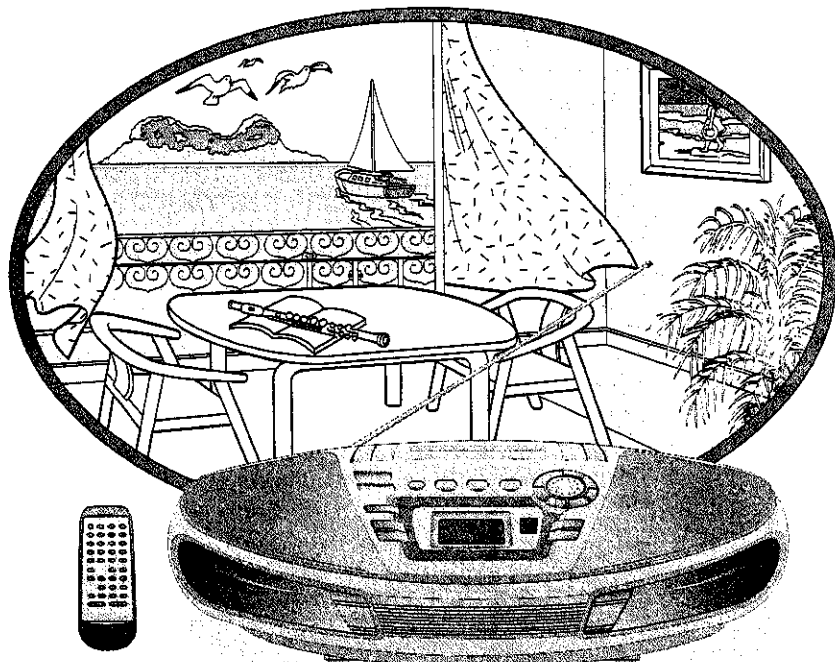


Portable Stereo CD System

RX-ES30

Operating Instructions



COMPACT
disc
DIGITAL AUDIO

Panasonic®

Note:

The "EB" indication shown on the packing case indicates United Kingdom.

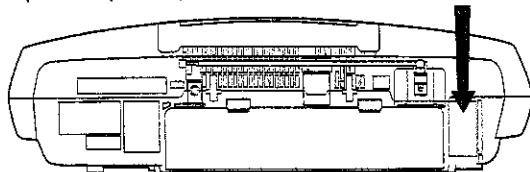
Before connecting, operating or adjusting this product, please read these instructions completely. Please save this manual.

RQT4766-B

GN

CLASS 1 LASER PRODUCT

(Back of product)



DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.	(Inside of product)
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING. NÅR SIKKERHEDSÅBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSETTELSE FOR STRÅLING.	(Indersiden af apparatet)
VARO!	AVATTIASSA JA SUOJALUKITUS OHITETTAESSA OLET ALTIINA NÄKYMÄTÖN LASERISÄTELYLLE. ÄLÄ KATSO SÄTEESEEN.	(Tuotteen sisällä)
VARNING	OSYNLIG LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN.	(Apparatens insida)
ADVARSEL	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNDGÅ EKSPONERING FOR STRÅLEN.	(Produktets indside)
VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.	(Im Inneren des Gerätes)

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORM-
ANCE OF PROCEDURES OTHER THAN THOSE SPECI-
FIED HEREIN MAY RESULT IN HAZARDOUS RADIATION
EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR
YOURSELF. REFER SERVICING TO QUALIFIED
PERSONNEL.

CAUTION!

DO NOT INSTALL OR PLACE THIS UNIT IN A BOOK-
CASE, BUILT IN CABINET OR IN ANOTHER CONFINED
SPACE IN ORDER TO KEEP WELL VENTILATED CONDI-
TION. ENSURE THAT CURTAINS AND ANY OTHER
MATERIALS DO NOT OBSTRUCT THE VENTILATION
CONDITION TO PREVENT RISK OF ELECTRIC SHOCK
OR FIRE HAZARD DUE TO OVERHEATING.

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR
PRODUCT DAMAGE, DO NOT EXPOSE THIS APPLI-
ANCE TO RAIN, SPLASHING, DRIPPING OR MOISTURE.

Dear customer

Thank you for purchasing this product.
For optimum performance and safety, please read these instructions
carefully.

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Supplied Accessories

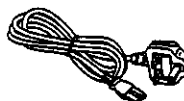


Please check and identify the supplied
accessories.
Use numbers indicated in parentheses when
asking for replacement parts.

☐ AC power cord 1pc.

For United Kingdom:
(VJA0733)

For Australia and New Zealand:
(RJA0035-X)



☐ Remote control transmitter (RAK-RX949WK) 1pc.



Caution for AC Mains Lead

(For United Kingdom)

"EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 5-ampere fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362. Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below. If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below. Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

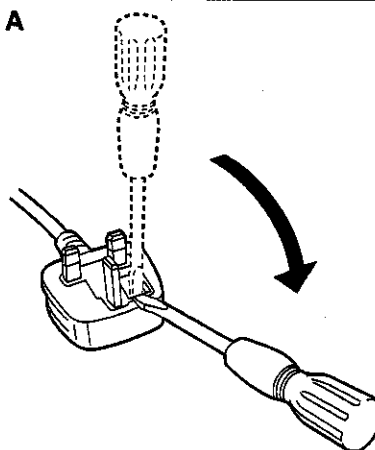
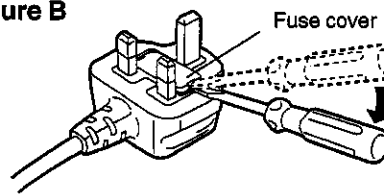


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

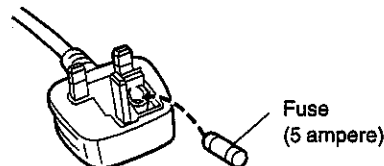
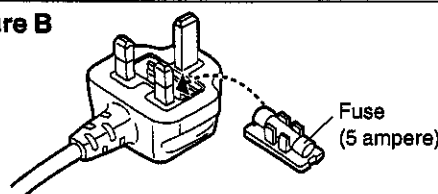


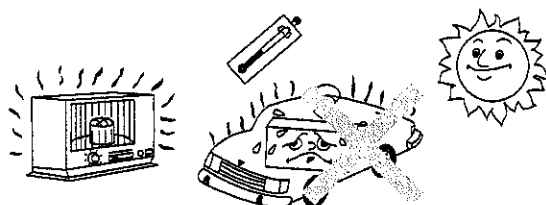
Figure B



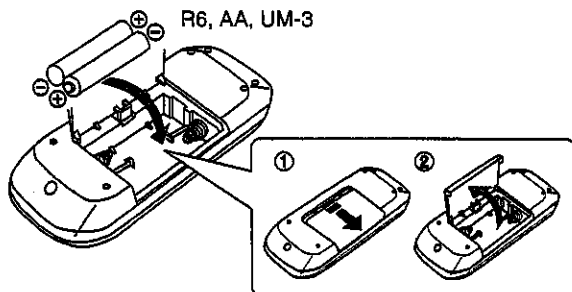
Before use

A

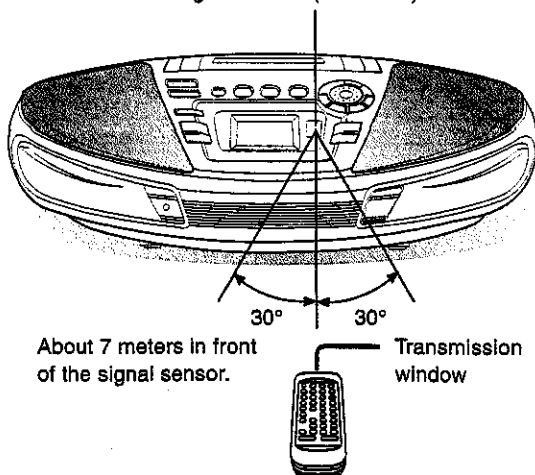
Max. 40°C

**B**

R6, AA, UM-3

**C**

Remote control signal sensor (SENSOR)

**Precautions**

- If this unit is not used for a long period of time or is used only from an AC power source, remove all the batteries to prevent potential damage due to possible battery leakage.
- Avoid using or placing this unit near sources of heat. Do not leave it in an automobile exposed to direct sunlight for a long time with the doors and windows closed as this may deform the cabinet.
- Avoid cuts, scratches, or poor connections in the AC power cord, as they may result in possible fire or electric shock hazard. Also, excessive bending, pulling or splicing of the cord should be avoided.
- Do not unplug the AC power cord by pulling on the cord. To do so may cause premature failure or shock hazard.
- Do not operate this unit on AC mains in a bathroom, as a potential shock hazard may result.
- When not in use, disconnect the AC power cord from the household AC outlet.

Use of batteries

- Do not use rechargeable type batteries.
- Do not mix old and new batteries, or batteries of the different types (manganese and alkaline, etc.).
- Always remove old, weak or worn-out batteries promptly and dispose of them properly.
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them, and be sure they are not short-circuited.
- If this unit is not to be used for a long period of time or is used only from an AC power source, remove the batteries and store them in a cool, dark place.
- If a battery leaks, remove all batteries and dispose them properly.
- Thoroughly clean the battery compartment before inserting new batteries.
- If the electrolyte comes into contact with skin or clothes, flush with water immediately.
- Keep batteries out of reach of children.
- Do not attempt to recharge alkaline or manganese batteries.
- Batteries installed with incorrect polarities may leak and damage the unit.

In these operating instructions "unit off" is defined as follows:
 "Standby" when AC power is used.
 "Battery power off" when batteries are used.

Concerning the Remote Control**Battery (not included) installation and removal**

Remove the batteries by pulling the positive side (+) of the battery up.

Correct method of use**Operation notes**

- Do not place obstacles between the remote control signal sensor and remote control unit.
- Do not expose the remote control signal sensor to direct sunlight or to the bright light of an inverter fluorescent light.
- Take care to keep the remote control signal sensor and end of the remote control unit free from dust.

To prevent damage

- Never place heavy items on it.
- Do not disassemble or reconstruct it.
- Do not spill water or other liquids on it.

Power Sources

Operating unit on AC power **A**

FOR UNITED KINGDOM ONLY
BE SURE TO READ THE CAUTION FOR THE AC MAINS
LEAD ON PAGE 3 BEFORE CONNECTION.

Connect the included AC power cord to the [AC IN ~] socket of the unit and your household AC outlet.

Operating unit on battery power (Not included)

Battery installation and removal **B**

Place unit on a soft cloth when installing and removing batteries to avoid damaging the front panel.

- 1 Open the battery cover on the rear panel.
- 2 Install batteries in the order indicated in the diagram.

Remove batteries by inserting your finger into opening at the bottom of the unit and pushing out. **C**

When to replace the batteries

When the batteries are weak:

" " starts to flash and "U01" appears on the display, then the unit automatically turns itself off.

Be sure to replace all batteries with new ones.

Memory batteries (Not included)

What is memory?

Memory is the information which can be programmed into the unit such as:

- Time
- Time programming
- CD programming
- Radio stations

If memory batteries are not used, the memory is cancelled at the following times.

- In electric failures
- When the AC power cord is removed from the AC outlet
- When using batteries as the power source, the AC power cord is inserted into the unit while disconnected from the AC outlet

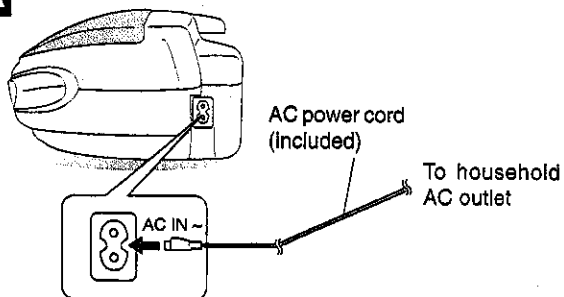
Battery installation and removal **D** **E**

Lift the negative end of the number 4 battery to remove batteries.

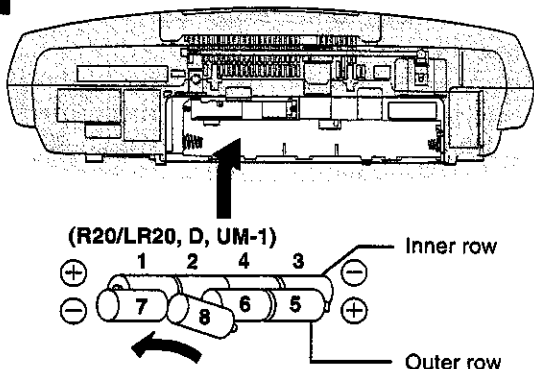
Replacing batteries

- The service life of these batteries is approximately one year. To preserve the memory, connect the AC power cord to the household AC outlet before replacing all the memory batteries with new ones.
- When disconnecting the AC power cord, first turn the unit off by pressing [P/I]. The service life of the memory back-up batteries is reduced if the AC power cord is disconnected from the household AC outlet with the power still supplied.

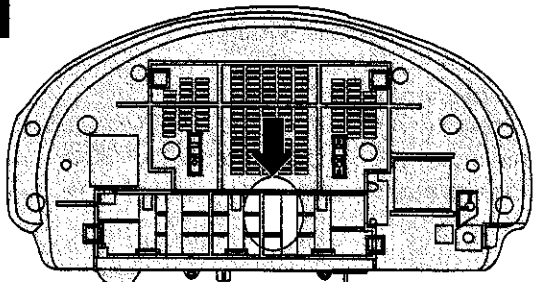
A



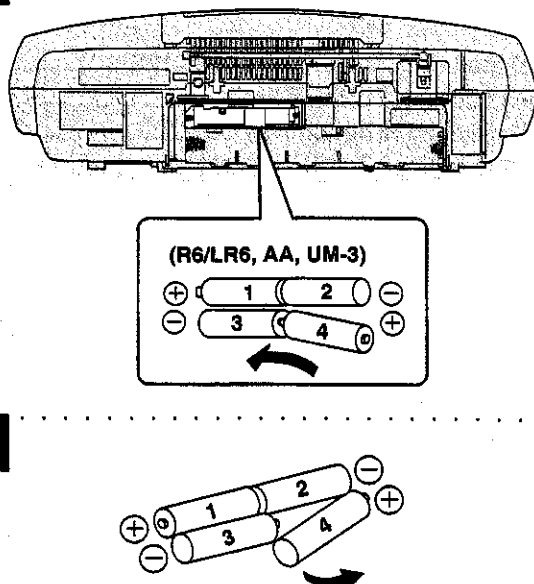
B



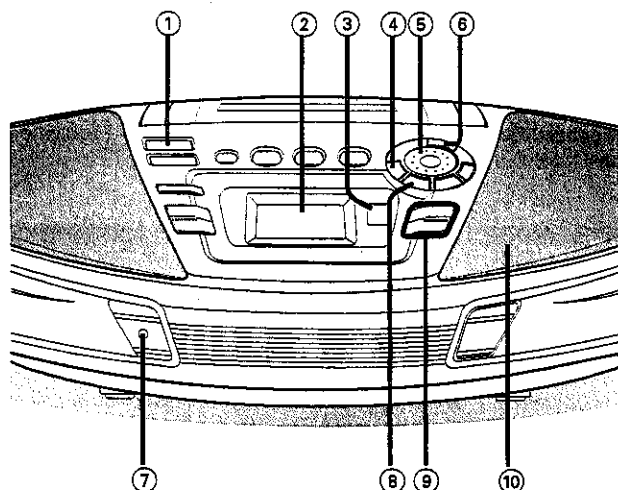
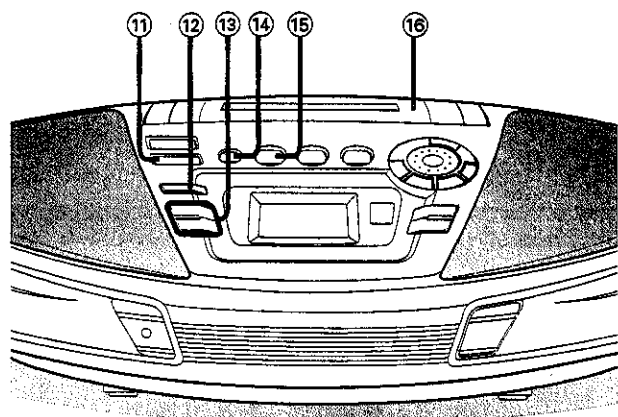
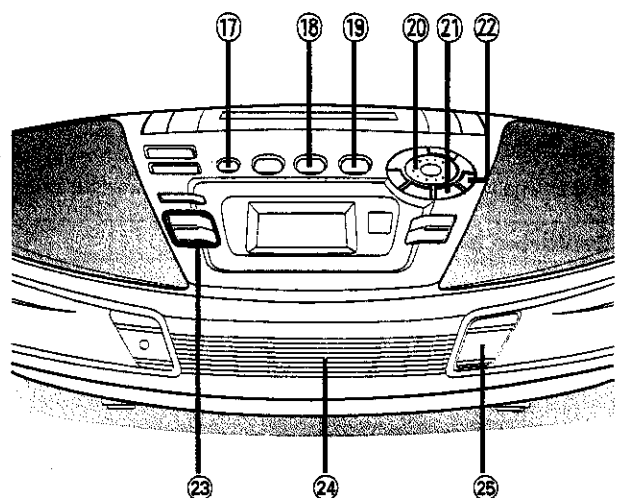
C



D



Before use

A**B****C**

Location of Controls

Basic controls

A

Number	Designation	Reference Page
①	Standby/on switch (⏻/⏻)	
	Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.	
②	Display panel	
③	Remote control signal sensor (SENSOR)	4
④	Play timer/record timer button (⏻/⏻)	22-24
⑤	Time adjust/preset tuning/CD track select/equalizer jog (⏮/⏭)	8, 9, 11, 12
⑥	Equalizer mode button (EQ MODE)	9
⑦	Standby Indicator (⏻)	
	When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.	
⑧	Clock/timer button (CLOCK/TIMER)	8, 22, 23, 24
⑨	Volume control buttons (VOLUME +, -)	10
⑩	Speaker	

Cassette deck controls

B

Number	Designation	Reference Page
⑪	Deck eject button (DECK ⏻)	15
⑫	Record/record pause button (⏻/⏻ REC/REC PAUSE)	18, 19
⑬	Fast forward/rewind/TPS buttons (FF ⏻ / + / ⏭, REW ⏮ / - / ⏪)	16
⑭	Tape mode select/stop button (⏻ TAPE/CD)	15
⑮	Cassette play/direction button (⏻ TAPE)	15
⑯	Deck	

Tuner/CD controls

C

Number	Designation	Reference Page
⑰	CD mode select/stop button (⏻ TAPE/CD)	12
⑱	Band button (TUNER BAND)	10
⑲	CD play/pause button (⏻/⏻ CD)	12
⑳	Preset tuning/CD track select jog (⏮/⏭)	11, 12
㉑	CD program/clear, tuner preset button (⏻ MEMORY - CLEAR)	11, 14
㉒	CD recording mode button (CD REC MODE)	20, 21
㉓	Tuning/CD search buttons (FF ⏻ / + / ⏭, REW ⏮ / - / ⏪, TUNING) ..	10, 12
㉔	CD tray	
㉕	CD tray open button (⏻ CD OPEN)	12

Location of Controls

Remote Control

A

Number	Designation	Reference Page
26	Sleep timer button (SLEEP)	24
27	Numbered button	11, 13, 14
28	Random play button (RANDOM)	13
29	Repeat button (REPEAT)	13
30	CD program/tuner memory button (PGM/MEMORY)	11, 14
31	Tuning buttons (- TUNE +)	10
32	Tape counter reset button (C-RESET)	16
33	Display select button (DISPLAY)	8
34	Reverse mode select button (REV MODE)	15
35	Timer fader button (TIMER FADER)	25
36	Sound virtualizer button (SOUND VIRTUALIZER)	9
37	Preset EQ button (PRESET EQ)	9
38	CD skip/search buttons (◀◀, ▶▶)	12
39	CD stop/program clear button (■/CLEAR)	12, 14
40	FM mode/BP button (FM MODE/BP)	10, 18
41	Fast forward/TPS button (TPS FF)	16
42	Rewind/TPS button (REW TPS)	16
43	Tape stop button (■)	15

When the unit is supplied with AC power, buttons such as ① function the same way as the buttons on the main unit. To save power, the unit cannot be turned on from the remote control when batteries are used.

Using Headphones B

Lower the volume and connect the headphones (not included).

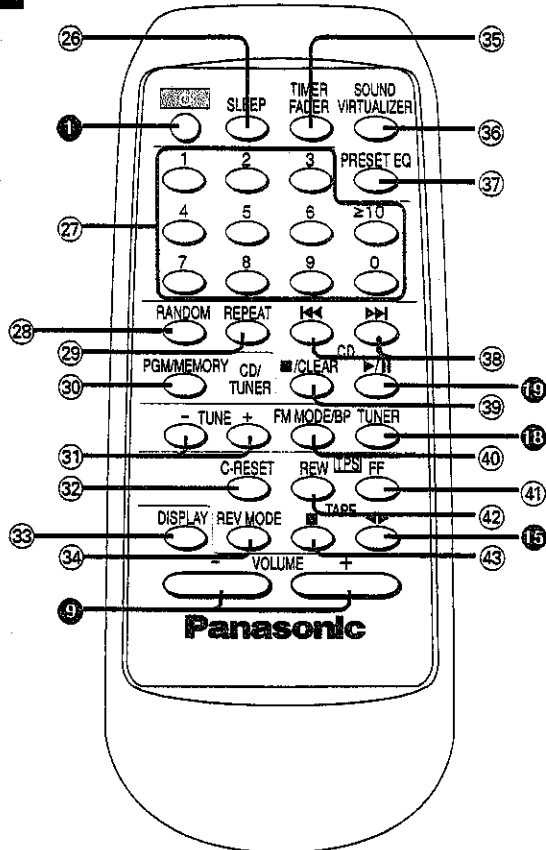
Plug type: 3.5 mm stereo

Note

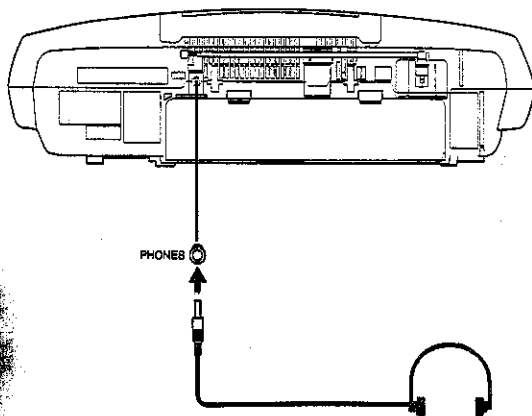
Avoid listening for prolonged periods of time to prevent hearing damage.

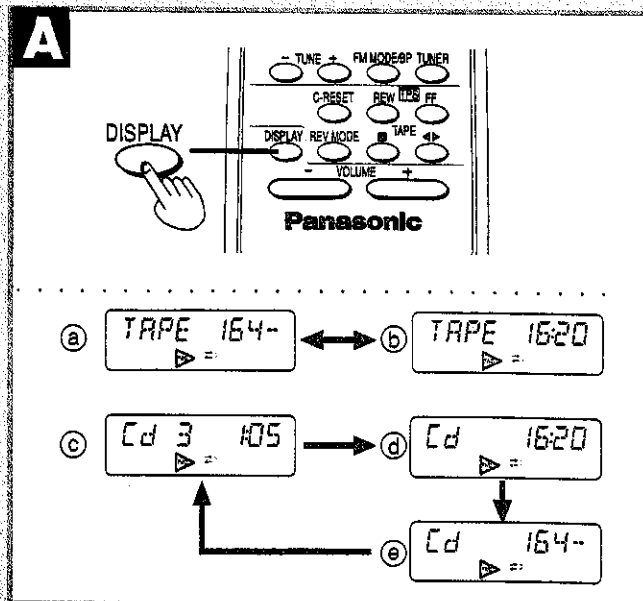
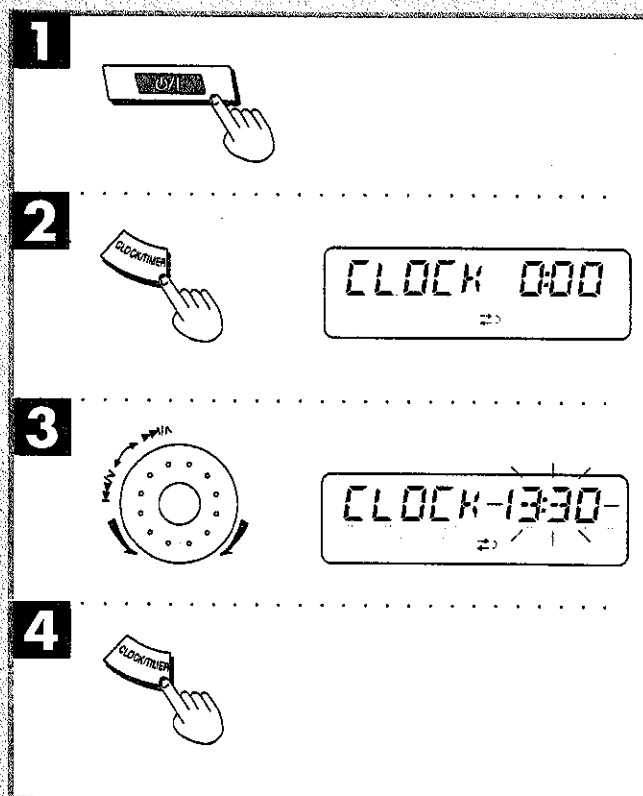
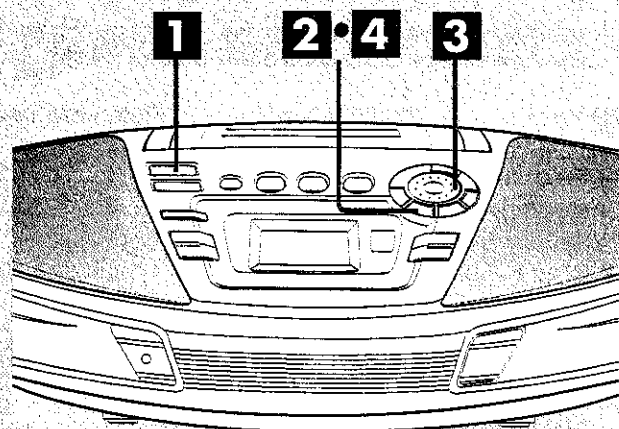
Before use

A



B





Setting the Clock

The clock has a 24-hour display.
Example: Setting the clock to 13:30;

- 1** Press [POWER].
(This turns the unit on.)
- 2** Press [CLOCK/TIMER].
"CLOCK" is displayed.

CLOCK → ON @PLAY → OFF @PLAY
 Original display ← OFF @REC ← ON @REC

 (The display changes each time the button is pressed.)
- 3** Dial [◀/▶/∨/∧] to show desired time.
The time display can be changed in one minute units by dialing the jog.
Hint
 If the jog is dialed in quick succession, the time display will change in 10 minute units.
- 4** While the time display is flashing:
Press [CLOCK/TIMER].
The clock now starts operating, and the display returns to its original status.

To display the clock (When the unit is on): **A**
(Available only from the remote control)

Press [DISPLAY] when the unit is on.

Selecting the Display **A**

(Only from the remote control)

Press [DISPLAY] when the unit is on.

The display changes each time the button is pressed.

- When using the cassette
 - Ⓐ Tape counter
 - Ⓑ Present time
- When using the radio or CD
 - Ⓒ Frequency/play status
 - Ⓓ Present time
 - Ⓔ Tape counter

"----" appears on the tape counter display when a cassette has not been inserted.

Changing the Sound Quality

Selecting equalizer effects

Four types of sound quality can be selected.

1 Press [EQ MODE].

(The present sound quality effect will display.)

2 Dial [◀◀/▶▶/▶▶/▶▶] to select desired sound quality.

When it is turned clockwise, the displayed image of the sound quality effect changes in the following sequence.

- ① Gives added punch to rock and other music (XBS)
- ② Lightens pop and other music (CLEAR)
- ③ Softens music (SOFT)
- ④ Enhances vocals (VOCAL)
- ⑤ No sound quality effects used

When using the remote control **A**

Press [PRESET EQ].

The displayed image of a sound quality effect changes each time the button is pressed.

Note

- Recordings are not affected by changes in sound quality.
- The effect when listening through headphones is different to that heard from the speakers.
- Select a different sound quality if treble sounds are too strong.

Using the "live" effect (Sound Virtualizer) **B**

(Only from the remote control)

The "live" effect allows enjoyment of the 3-D feeling listening to live music. Compared with earlier surround sound systems, the sound virtualizer leaves middle-range sounds such as vocals clear and gives natural width and depth to music. Sound virtualizer is effective with stereo sound.

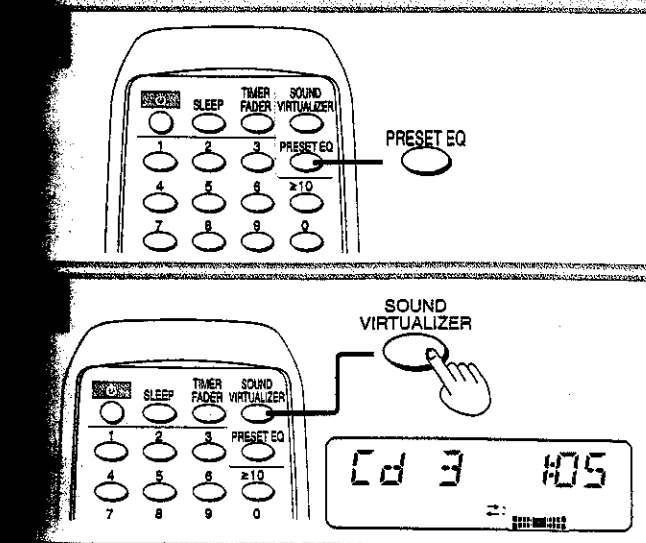
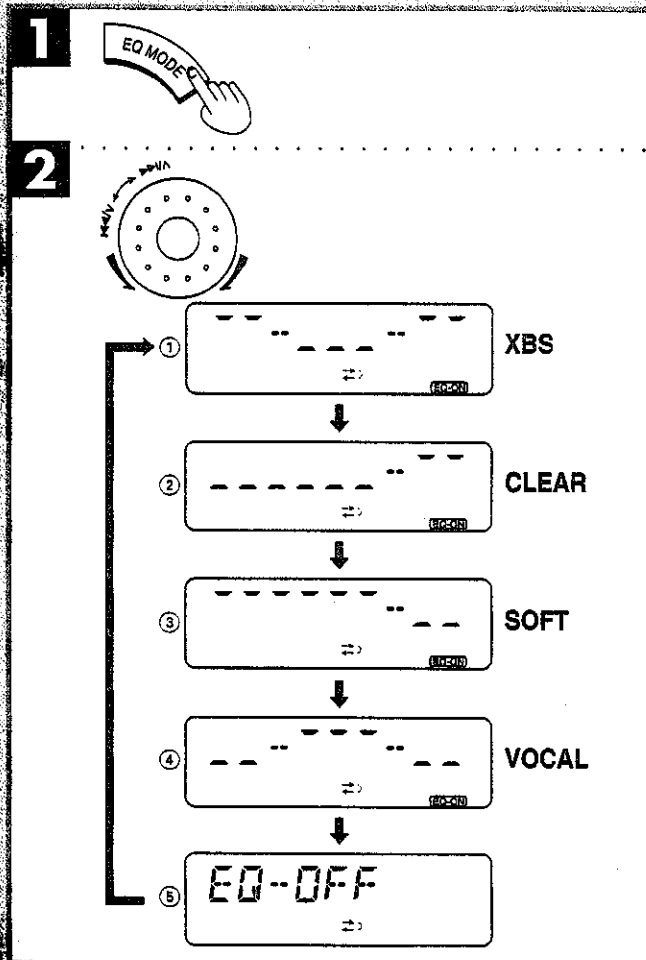
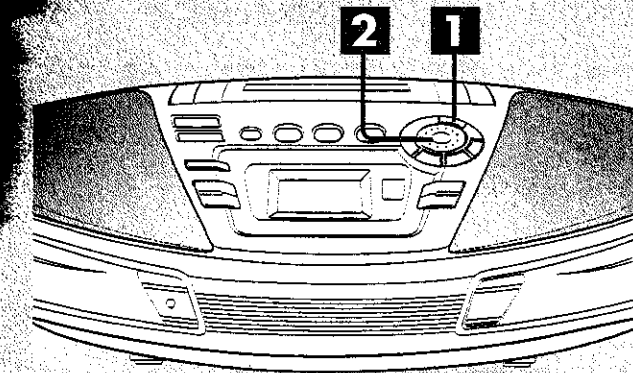
Press [SOUND VIRTUALIZER] to display "■ ■ ■ ■ ■".

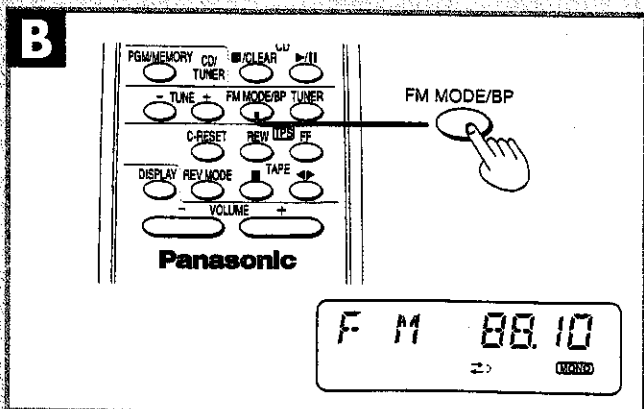
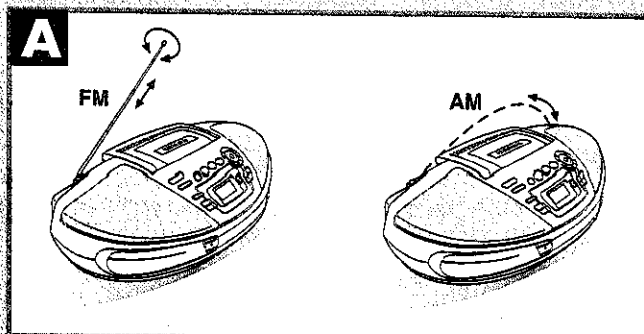
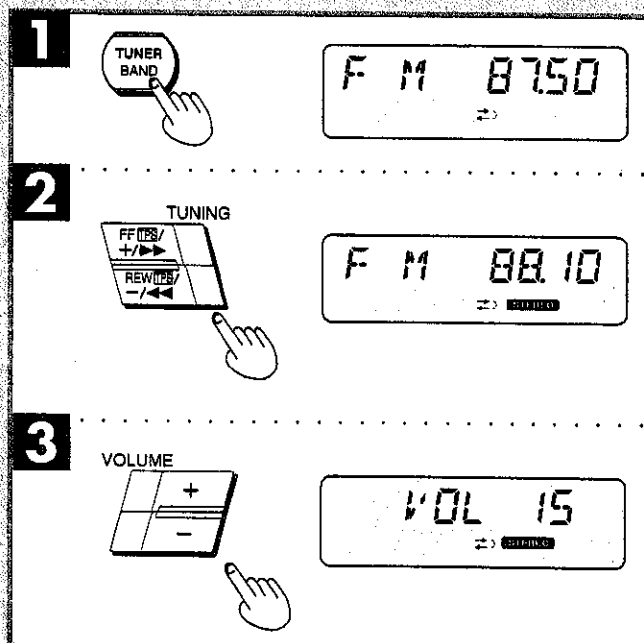
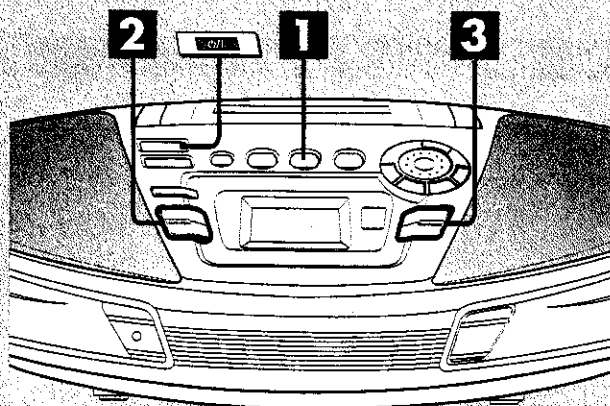
To cancel:

Press [SOUND VIRTUALIZER] to clear the "■ ■ ■ ■ ■" indicator.

Note

- The effect is not as apparent when listening through headphones.
- Cancel this effect if noise increases when listening to FM radio.
- Recordings are not affected by changes in sound quality.





Listening to the Radio

Normal tuning

Press [P/L].

(When using batteries for the power supply)

1 Press [TUNER BAND] to display "AM" or "FM".

AM ↔ FM

(The display changes each time the button is pressed.)

2 Press [+] or [-] to select the station.

"STEREO" lights when stereo broadcasts are being received.

Automatic tuning:

Keep [+] or [-] depressed until the frequency display starts to change. A station with good reception is automatically selected and the selection process then stops.

To stop automatic tuning, press [+] or [-] again.

Note

Automatic tuning may stop without a station having been tuned in when interference is encountered on neighbouring airwaves. In such a case, tune in a station by tapping [+] or [-].

3 Adjust the volume level.

Hint

- Pressing [TUNER BAND] will automatically turn the unit on and receive the station which was previously tuned (only when AC power is supplied).
- The volume can be adjusted even in the unit off mode. (Available only from the main unit)

Note

- The unit cannot be turned on from the remote control when batteries are being used to power the unit.
- Sound is momentarily interrupted if you load/unload tapes while listening to an AM broadcast.

Improving reception A

Adjust the length and direction of the whip antenna for FM, and change the direction of the unit for AM.

Note

Radio broadcasts may be hard to receive in a moving vehicle or building because their signals are weak. In such cases, use the unit near a window.

When interference of FM stereo reception occurs B

(Available only from the remote control)

Press [FM MODE/BP].

The "MONO" display appears.

Monaural sound is selected but noise is reduced and sound becomes clearer.

To return to stereo sound, press [FM MODE/BP] again to turn off the "MONO" display.

Leave the "MONO" display off to listen to FM stereo programs.

Listening to the Radio

Preset tuning

Once stations have been programmed, they can easily be tuned in.
Ten FM and ten AM stations can be programmed.

Programming stations

Preset radio stations on the FM and AM bands.

- 1** Press [TUNER BAND] to display "AM" or "FM".
AM ↔ FM
(The display changes each time the button is pressed.)
- 2** Press [+] or [-] to select the station.
- 3** Press [MEMORY - CLEAR] once.
"PGM" flashes.
- 4** While "PGM" is flashing:
Dial [◀/V ↔ ▶/Λ] to select the preset channel to be programmed.
- 5** While "PGM" is flashing:
Press [MEMORY - CLEAR].
If the "PGM" indicator goes out during programming, return to step 3.
- 6** Repeat steps 2 to 5 to program other stations.

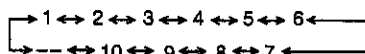
Selecting the preset channel

- ① Press [TUNER BAND] to display "AM" or "FM".
- ② Dial [◀/V ↔ ▶/Λ] to select the preset channel. **A**
▶/Λ : Up
◀/V : Down

To select a preset channel with the remote control
Press the numbered buttons. **B**
To select number 10
[≥10] → [1] → [0]

To skip an unwanted preset channel

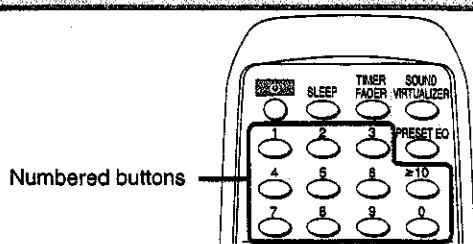
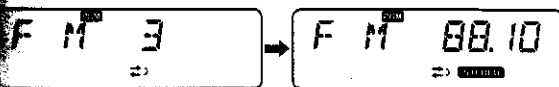
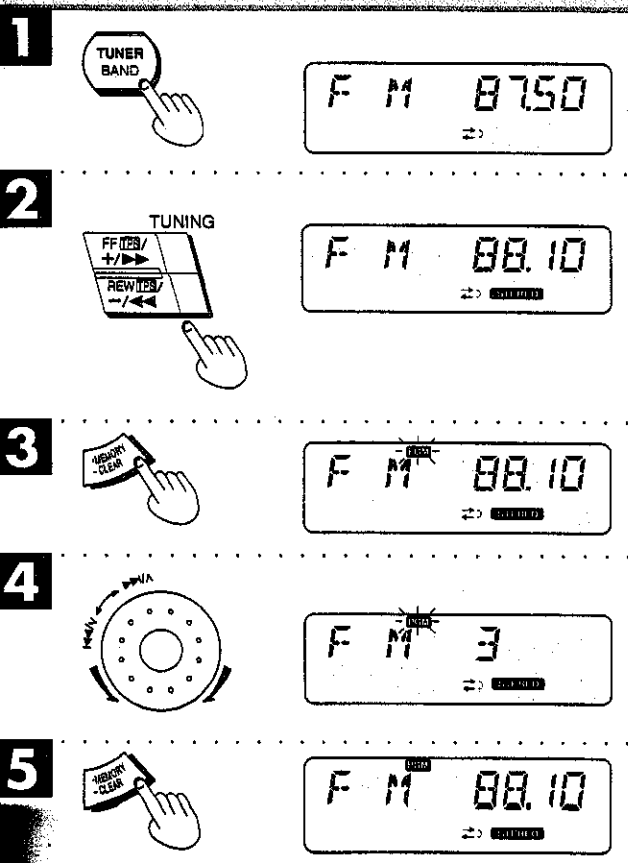
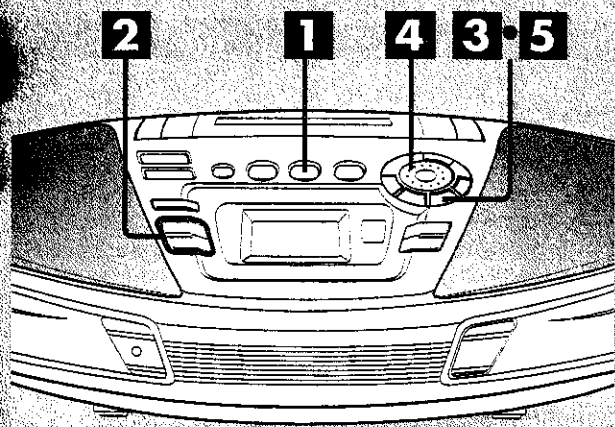
Example: If channel 3 is not needed

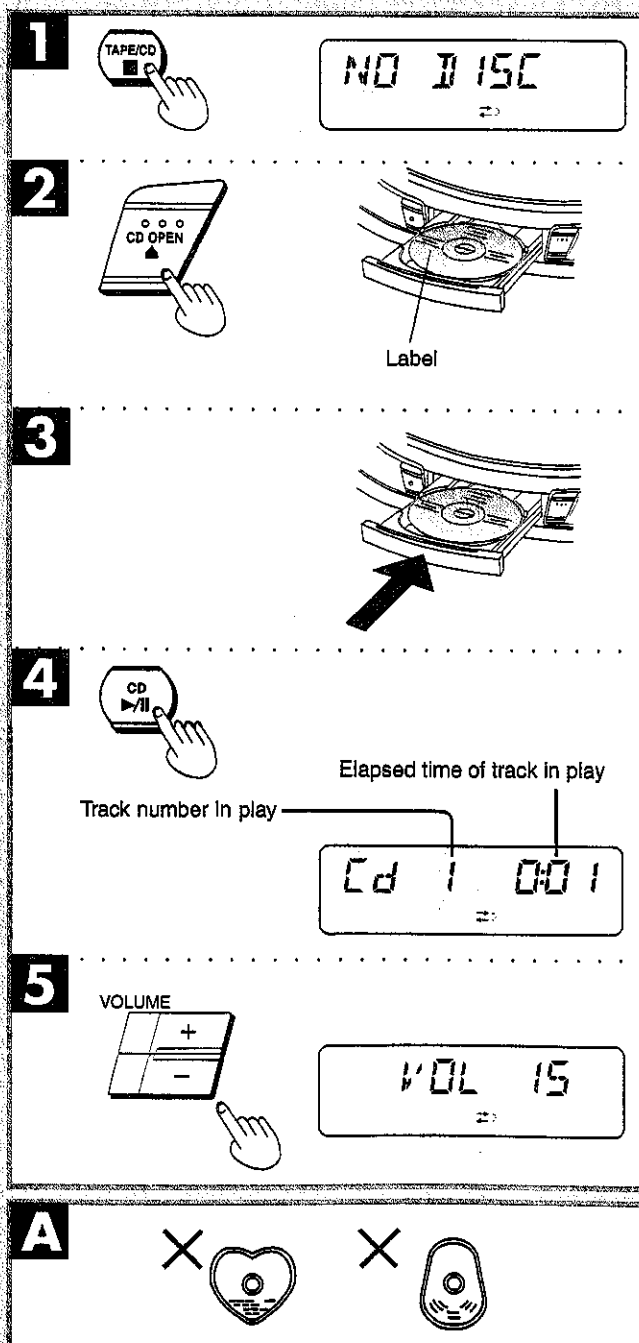
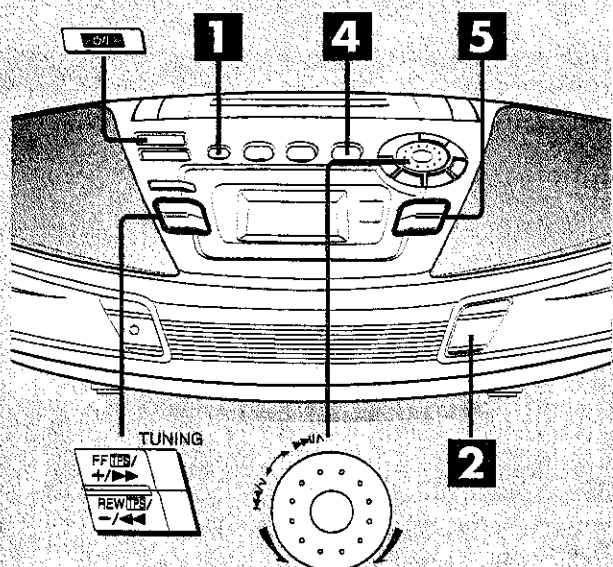
- ① Select number 3 (steps ① and ② above).
- ② Press [MEMORY - CLEAR] ("PGM" flashes).
- ③ While "PGM" is flashing, dial [◀/V ↔ ▶/Λ] until "--" is displayed.

- (The display changes each time the jog is dialed.)
- ④ Press [MEMORY - CLEAR].

The next time you select preset numbers, 3 is skipped.
1 → 2 → 4 → 5...

Note

The cleared number can still be selected with the remote control's numbered buttons.





Listening to CDs

Normal play

Press [⏮/I].

(When using batteries for the power supply)

- 1** Press [■ TAPE/CD] to select the CD mode.
TAPE ↔ Cd
(The display changes each time the button is pressed.)
"NO DISC" indicates a disc has not been inserted.
- 2** Press [▲ CD OPEN], then insert a CD.
Insert the CD with the label facing up.
- 3** Push the CD tray to close it.
- 4** Press [▶/II CD].
Plays to the last track and automatically stops.
- 5** Adjust the volume level.

To stop playing:

Press [■ TAPE/CD].

To stop play from the remote control

Press [■/CLEAR].

Press [▶/II CD] to pause play.

Press [▶/II CD] to return to play mode.

Note

- The unit cannot be turned on from the remote control when batteries are being used to power the unit.
- If interference occurs to radios or televisions, place the unit further away from this equipment.
- Do not use irregular shape CDs. **A**

Hint

- Pressing [▶/II CD] automatically turns the unit on, and if a CD is inserted, begins play (only when AC power is supplied).
- The volume can be adjusted even in the unit off mode. (Available only from the main unit)

Skipping tracks

Main unit : Dial [◀◀/V ↔ ▶▶/∧] to skip tracks.

Remote control : Press the button once for each track to be skipped.

	Backward	Forward
Main unit	◀◀/V	▶▶/∧
Remote control	◀◀	▶▶

Searching backward and forward

Keep the button pressed during play or pause mode.

	Backward	Forward
Main unit	◀◀	▶▶
Remote control	◀◀	▶▶

Listening to CDs

Starting play from a selected track (Direct play)

(Only from the remote control)

Preparation : Press [■/CLEAR].

If "PGM" is illuminated, press [■/CLEAR] again to clear it.

Select the track number with the numbered buttons.

Play starts at the selected track and continues to the last track.

To select a track numbered 10 or more

Example

Track 20: [≥10] → [2] → [0]

Track 35: [≥10] → [3] → [5]

Repeating tracks

(Only from the remote control)

Press [REPEAT] before or during play.

1- [REPEAT] → [REPEAT] → off (no display)

(The display changes each time the button is pressed.)

Press [▶/II] to begin play if you are in the stop mode.

To repeat only one track:

Press [REPEAT] to display "1- [REPEAT]". **A**

To repeat all tracks on the CD:

Press [REPEAT] to display "[REPEAT]". **B**

To repeat programmed tracks:

① Program desired tracks (steps 1 to 4 on page 14).

② Press [REPEAT] to display "[REPEAT]".

③ Press [▶/II] to begin play.

To clear the repeat function:

Press [REPEAT] to cancel "1- [REPEAT]" or "[REPEAT]".

Pressing [▲ CD OPEN] will cancel repeat function.

Random play

(Only from the remote control)

1 Press [■/CLEAR] to select the CD mode.

2 Press [RANDOM] when CD is in stop mode.

"RANDOM" is not displayed if pressed when CD is in play mode.

3 Press [▶/II].

All tracks play at random, and play automatically stops.

To cancel random play:

• Press [RANDOM] to clear "RANDOM" display.

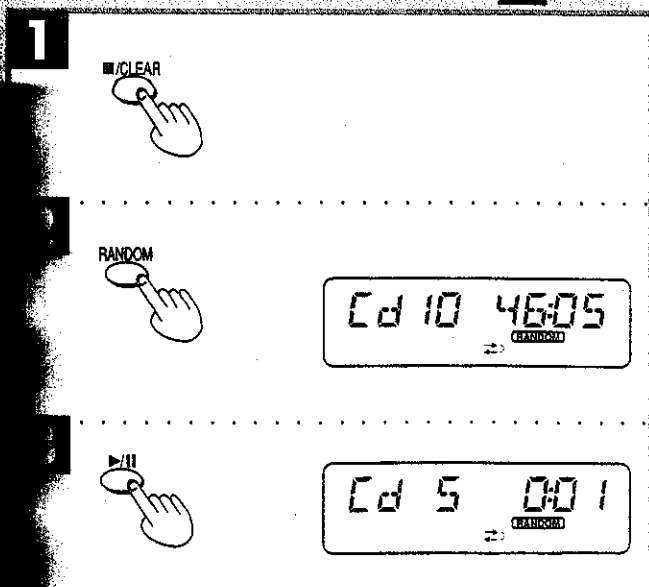
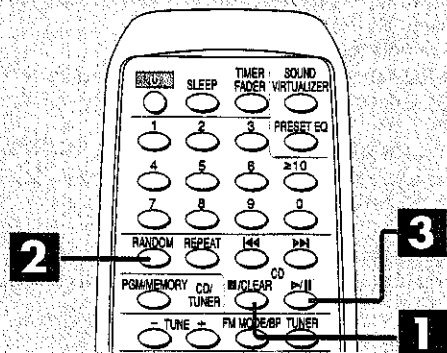
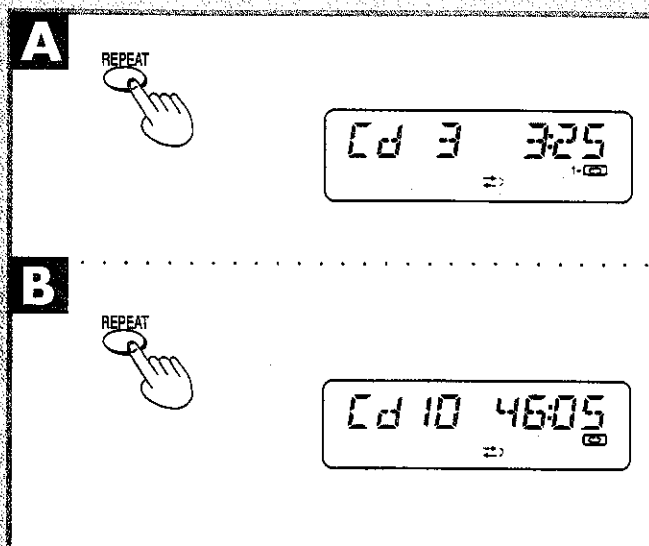
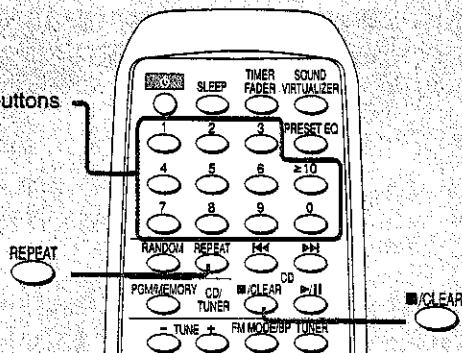
If cancelled during random play, the CD plays from the track in play to the end of the CD, and automatically stops.

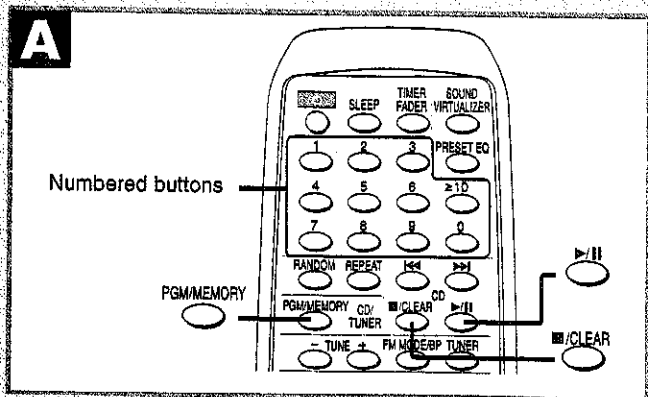
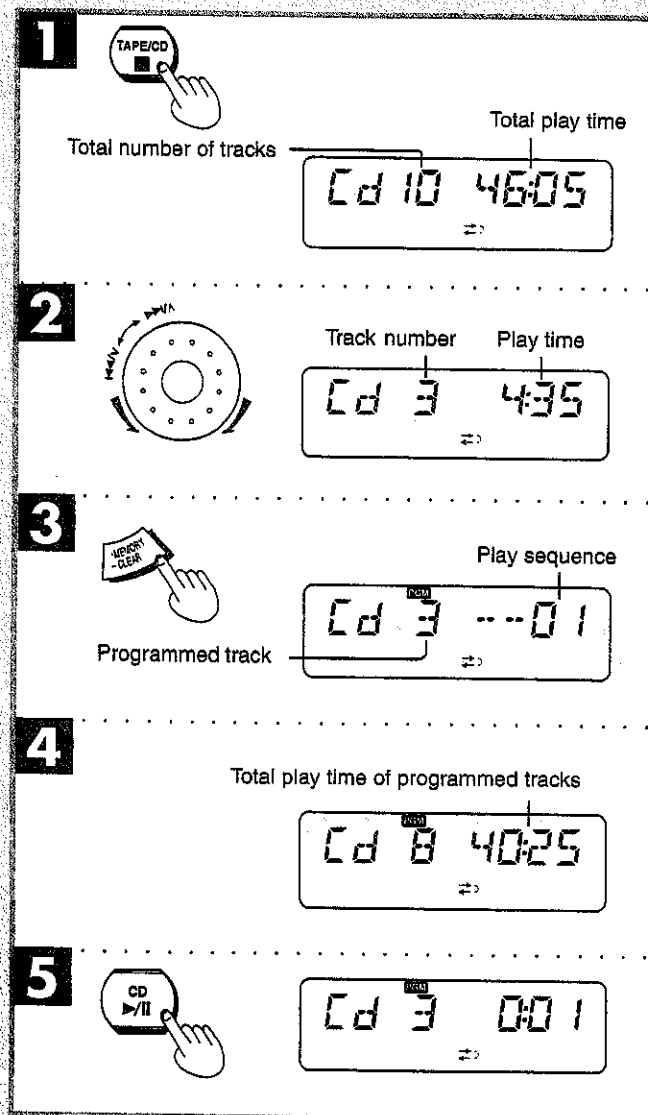
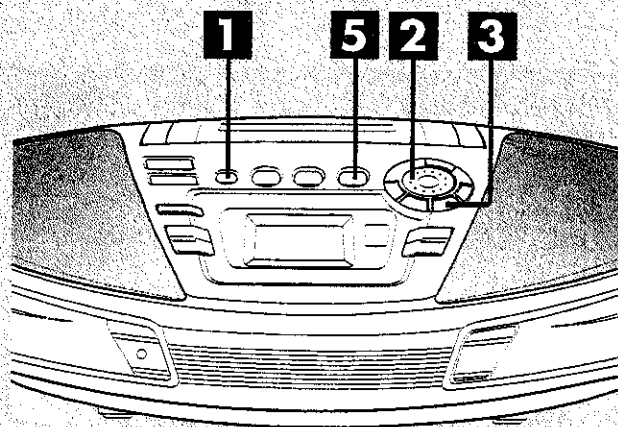
• Pressing [▲ CD OPEN] will cancel random function.

Note

- Random play cannot be used in combination with program play.
- Skipping to tracks which have already been played is not possible.
- Searching forward and backward are possible only within the track in play.
- Tracks cannot be selected with the remote control's numbered buttons during random play. ("E" is displayed.)

Numbered buttons





Listening to CDs

Selecting and listening to favourite tracks (Program play)

Up to 36 tracks can be programmed.

- 1** Press [TAPE/CD] to select the CD mode.
When "[RANDOM]" is displayed, press [RANDOM] on the remote control to clear the display.
- 2** Dial [◀◀/V ↔ ▶▶/∧] to select the desired track.
- 3** Press [●MEMORY - CLEAR] to record the selection.
- 4** Continue programming by repeating steps **2** and **3**.
- 5** Press [▶/|| CD].
Selected tracks play in the programmed sequence, and play automatically stops.

When using the remote control A

- ① Press [■/CLEAR] to select the CD mode.
- ② Press [PGM/MEMORY]. "PGM" illuminates.
- ③ Press the numbered buttons to select the track to be programmed.
- ④ Press [▶/||].

To cancel program play:

(From the main unit)

Keep [●MEMORY - CLEAR] pressed when CD is in stop mode until "CLEAR" is displayed.

(From the remote control)

Press [■/CLEAR] when CD is in stop mode to display "CLEAR".
Pressing [▲ CD OPEN] will cancel program function.

When "----" is displayed:

Total play time of the programmed tracks exceeds 100 minutes.
Tracks can still be programmed and played.

When "FULL" is displayed:

36 tracks have already been programmed. No further tracks can be programmed.

Memory retention of programmed tracks:

Track programming is retained even if play is stopped or the unit is turned off.

The display "Cd-P" indicates that programming is retained in the memory.

To check programming:

While "Cd-P" display is on, dial [◀◀/V ↔ ▶▶/∧].
The track number and its play sequence can be checked each time the jog is dialed.

Listening to Cassettes

Types of tapes which can be played on this unit:
The unit automatically identifies type of tape.

Normal position/TYPE I	○
High position/TYPE II	○
Metal position/TYPE IV	○

Press [⏻/⏮].

(When using batteries for the power supply)

1 Press [TAPE/CD] to select the cassette mode.

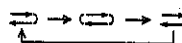
TAPE ↔ Cd

(The display changes each time the button is pressed.)

2 Press [DECK Δ], load the tape and close the lid.

The direction is automatically set to play the top side ("▶" is displayed).

3 Press [REV MODE] on the remote control to select the mode.



(The display changes each time the button is pressed.)

↔ : Both sides are played.

↻ : Both sides play repeatedly until [TAPE/CD] is pressed.

→ : One side is played.

4 Press [◀▶ TAPE].

"FWD" is displayed and play begins. ("REV" is displayed when play begins while "◀" is displayed.)

▶ : The side which is facing up is played back.

◀ : The reverse side is playback.

5 Adjust the volume level.

To stop play:

Press [TAPE/CD].

To stop play from the remote control

Press [■].

To listen to the other side of the tape:

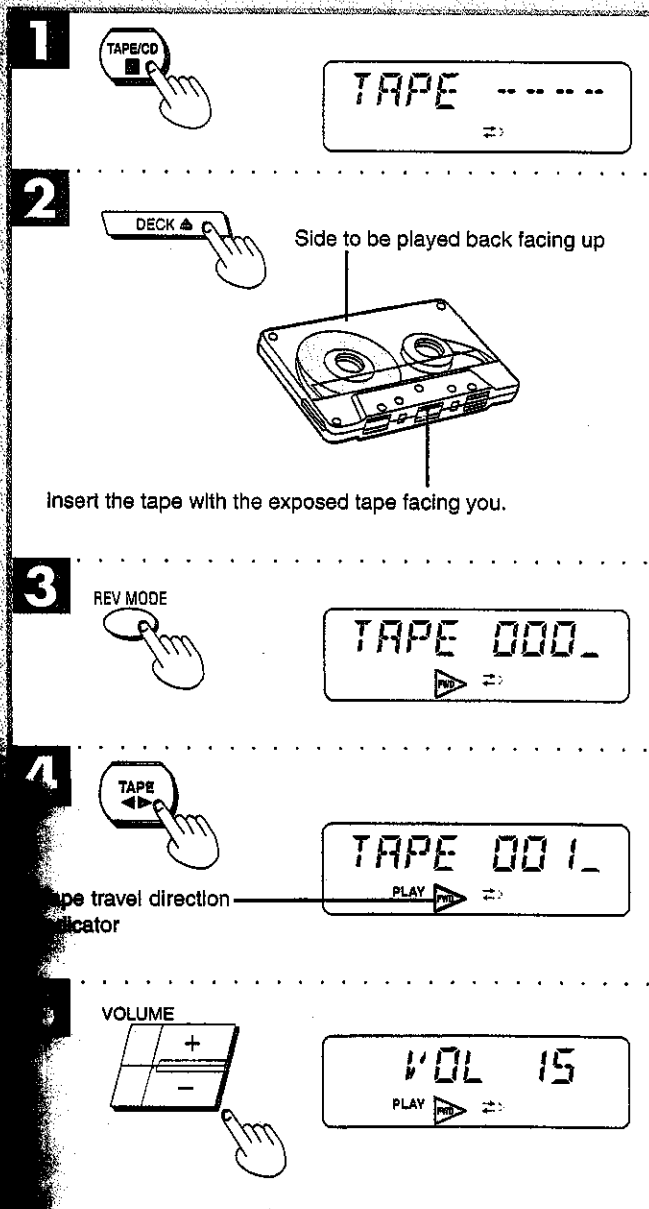
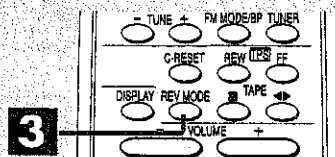
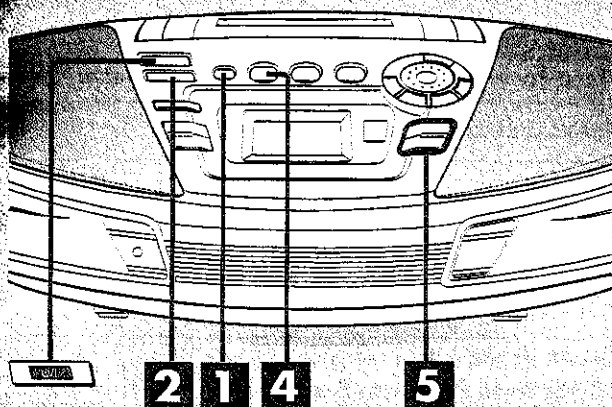
Press [◀▶ TAPE] during playback.

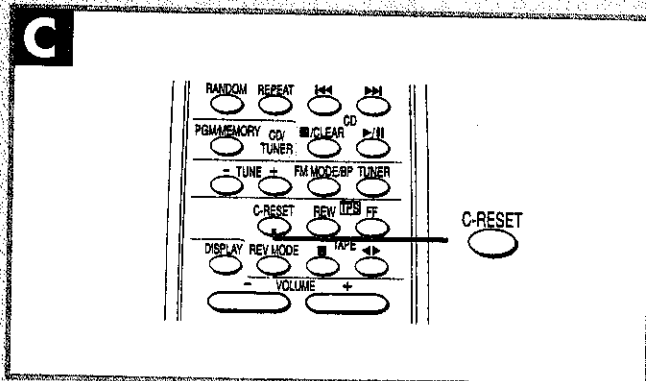
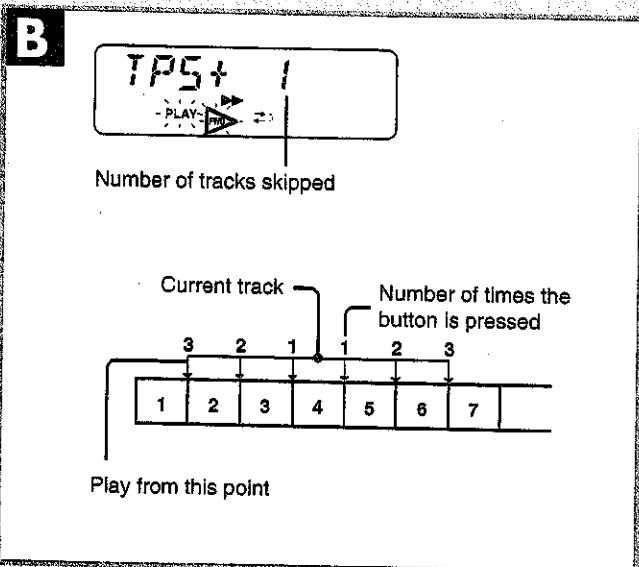
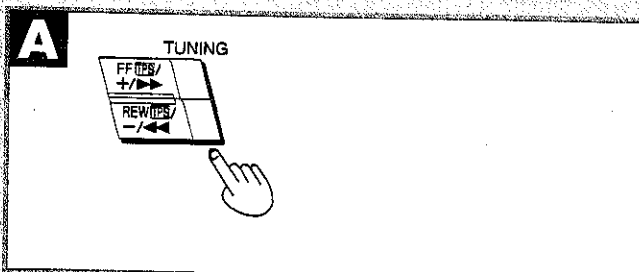
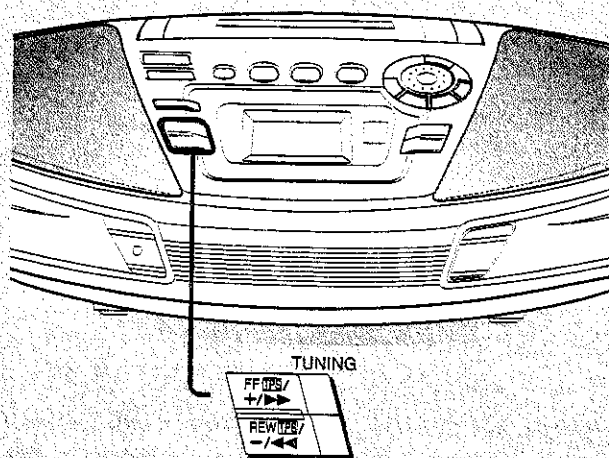
Hint

- Pressing [◀▶ TAPE] automatically turns the unit on, and if a tape is inserted, begins play (only when AC power is supplied).
- The volume can be adjusted even in the unit off mode. (Available only from the main unit)

Note

The unit cannot be turned on from the remote control when batteries are being used to power the unit.





Listening to Cassettes

Fast forwarding and rewinding a cassette **A**

Press during stop mode.

	Rewind	Fast forward
Main unit	REW TPS	FF TPS
Remote control	REW TPS	TPS FF

Finding the beginning of a track (TPS: Tape Program Sensor) **B**

Press the button once for each track to be skipped (up to 9 tracks).

Press during play mode.

	Backward	Forward
Main unit	REW TPS	FF TPS
Remote control	REW TPS	TPS FF

Note

Since the blank spaces between tracks are used for locating the beginning of each track, TPS may not operate in the following cases:

- ① When the blank spaces are 4 seconds or less.
- ② When there are no blank spaces on the tape.
- ③ When there are parts of a track which have been recorded at a particularly low level or which have not been recorded at all (such as with classical music).
- ④ When 10 or fewer seconds have elapsed since the beginning of a track or when there are 10 or fewer seconds until the beginning of the next track.
- ⑤ When a tape is recorded with fade-ins or fade-outs.

To reset the tape counter to "000" **C**

(Available only from the remote control)

Press **[C-RESET]**.

Before Recording

Types of tapes which can be used for recording

Automatically identifies the type of tape.

Normal position/TYPE I	○
High position/TYPE II	○
Metal position/TYPE IV	×

This unit cannot make a recording or erase correctly if metal position tapes are used.

To record from the beginning of the tape **A**

You cannot record on the leader part of the tape. Before recording, wind the tape past the leader to a point where recording can start immediately.

To erase a tape **B**

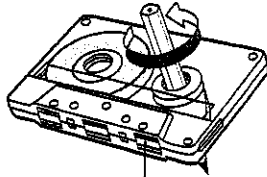
1. Load the recorded tape with the side to be erased facing upward.
2. Press [■ TAPE/CD] to select "TAPE".
3. Press [●/● II REC/REC PAUSE].

Note

- Any change made to the volume or sound quality during recording will not affect the recording.
- In order to prevent trouble caused by flat batteries, it is recommended that you either supply power to the unit from the household AC outlet or replace all the batteries with new ones when you are recording something which is important to you.
- The recording level is set automatically.
- "E" is displayed if the cassette you are using has had its tabs removed and make a recording. (⇒ page 26)

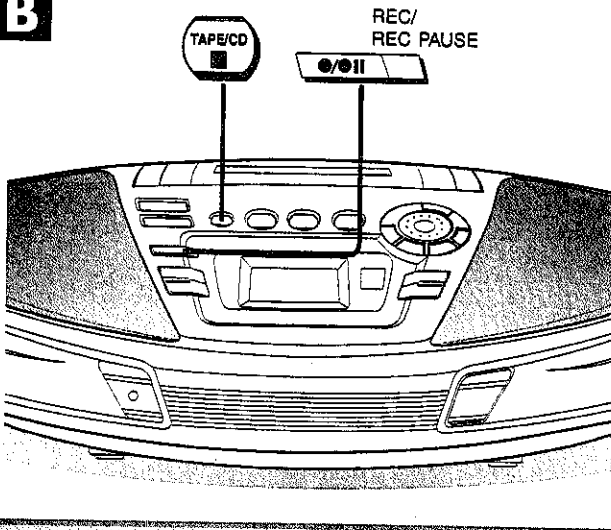
Your attention is drawn to the fact that recording pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

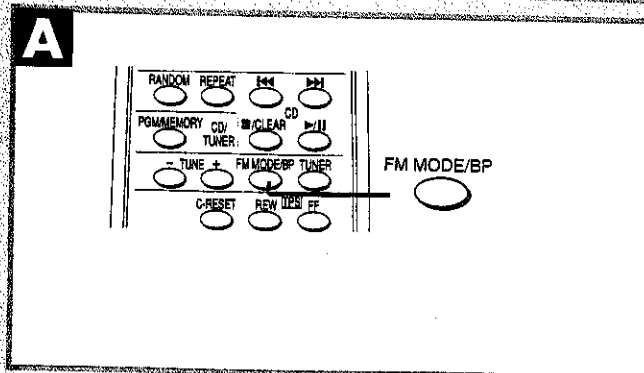
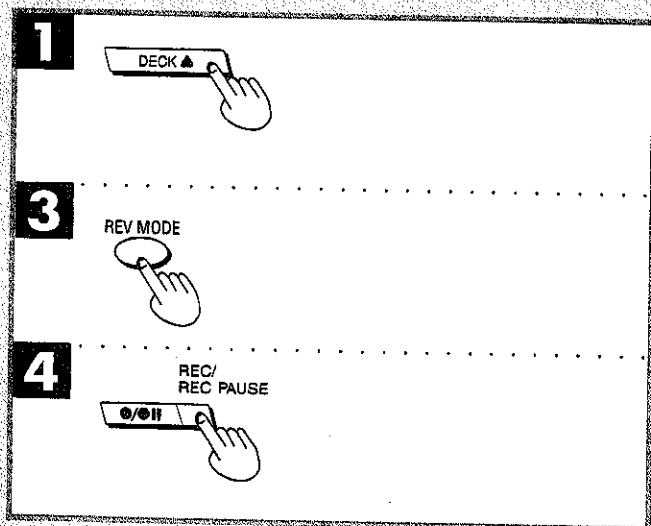
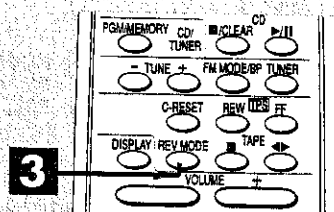
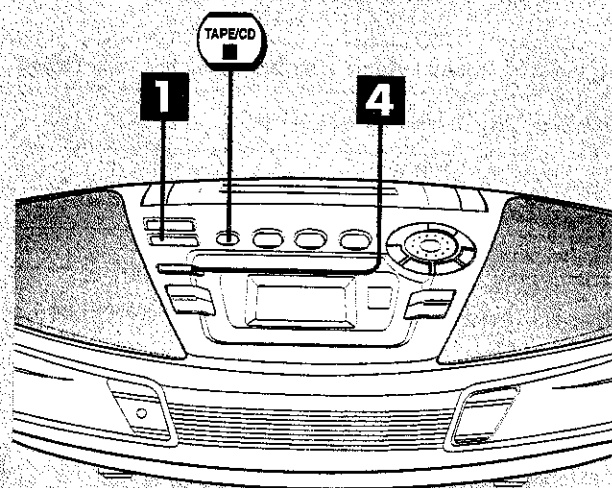
A



Leader tape (on which nothing can be recorded)

B





Recording Radio Programs

- 1** Press [DECK ▲] and load the cassette with the side to be recorded facing up.
- 2** Select desired radio station.
(⇒ page 10)
- 3** Press [REV MODE] on the remote control to select the mode.
⇒ : Records onto both sides, starting with the side facing up.
⇒ : Records one side only.
- 4** Press [●/● II REC/REC PAUSE].
"FWD REC" is displayed and recording begins. "REV REC" is displayed when recording begins while "◀" is displayed.

To stop recording:
Press [■ TAPE/CD].

To stop recording temporarily:
Press [●/● II REC/REC PAUSE].

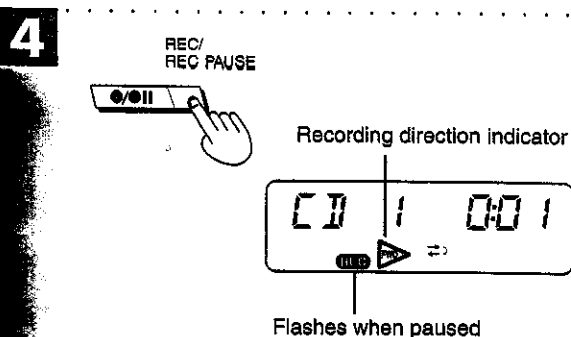
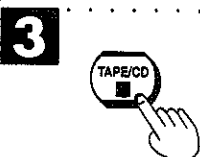
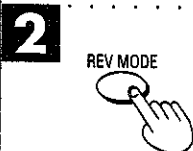
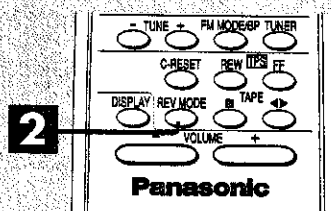
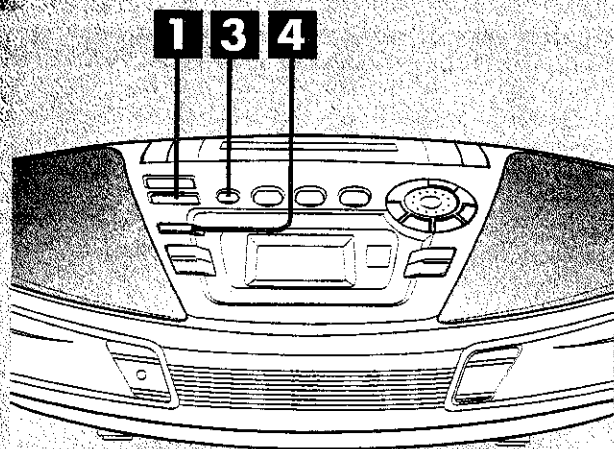
To resume recording, press [●/● II REC/REC PAUSE].

When there is too much interference during AM recording A

(Available only from the remote control)

Press [FM MODE/BP].

Select "bP1" or "bP2" whichever yields less noise.



Recording from CDs

Normal recording

Recording and CD play begin simultaneously.
Getting ready: Insert the CD.

- 1** Press [DECK ▲] and load the cassette with the side to be recorded facing up.
Tape length must be longer than the CD play time.
- 2** Press [REV MODE] on the remote control to select the mode.
 ➡ ➡: Records onto both sides, starting with the side facing up.
 ➡: Records one side only.
- 3** Press [■ TAPE/CD] to select the CD mode.
TAPE ↔ Cd
(The display changes each time the button is pressed.)
- 4** Press [●/● || REC/REC PAUSE].
"FWD REC" is displayed and recording and CD play begin simultaneously. "REV REC" is displayed when recording begins while "◀" is displayed.

To stop recording:
Press [■ TAPE/CD].

To pause recording:
Press [●/● || REC/REC PAUSE] (CD will also pause).
To begin recording again, press [●/● || REC/REC PAUSE].

After recording
When CD play is finished, the cassette simultaneously stops.

To continue recording a different CD on the same cassette:
1. Press [▲ CD OPEN] and replace the CD.
2. Press [●/● || REC/REC PAUSE].

Recording favourite tracks

1. Program desired tracks (⇒ steps 2 to 4 on page 14) after step 3.
2. Press [●/● || REC/REC PAUSE].

To skip tracks not to be recorded

1. Press [●/● || REC/REC PAUSE] during recording.
CD will also pause.
2. Dial [◀/V / ▶/Λ] to display the number of the next track to be recorded.
3. Press [●/● || REC/REC PAUSE] to begin recording again.

Recording from CDs

Easy CD recording (Auto)

Recording all tracks or programmed tracks of a CD in programmed order.

- It is not necessary to rewind the cassette. Recording always begins from the beginning of the side facing up.
 - If the side ends in the middle of a track, the track which was cut off is recorded on the opposite side from the beginning.
- Getting ready: Insert the CD.

1 Press [TAPE/CD] to select the CD mode.

2 Press [CD REC MODE] to display "AUTO".

AUTO → 1-REC → OFF

(The display changes each time the button is pressed.)

The necessary tape length will be displayed. (Example: Tape of 51 minutes or more necessary to record all tracks.)

3 Insert a cassette which is longer than that displayed in step 2.

Insert with the side to be recorded first up.

4 Press [●/● II REC/REC PAUSE].

Automatically rewinds, and recording from the first track begins after a 10 second interval.

Reverse mode is displayed as "←".

- ① Rewinding tape
- ② Recording 10 second interval
- ③ Recording begins

The unit stops when recording finishes.

To stop recording (CD will also stop):

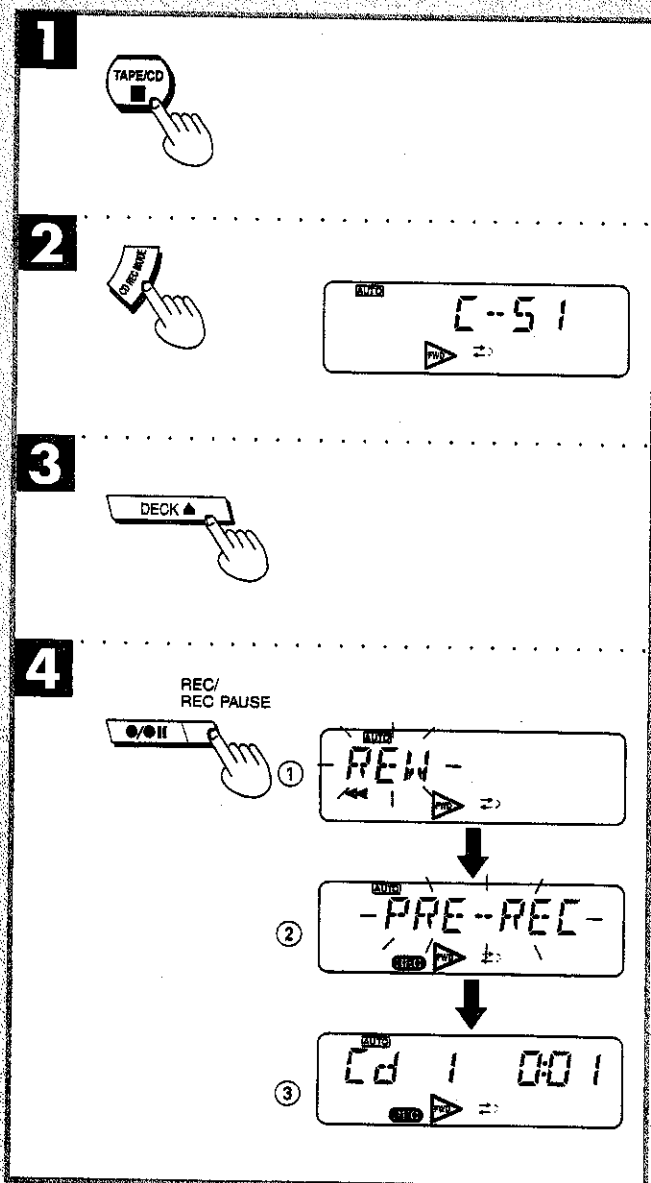
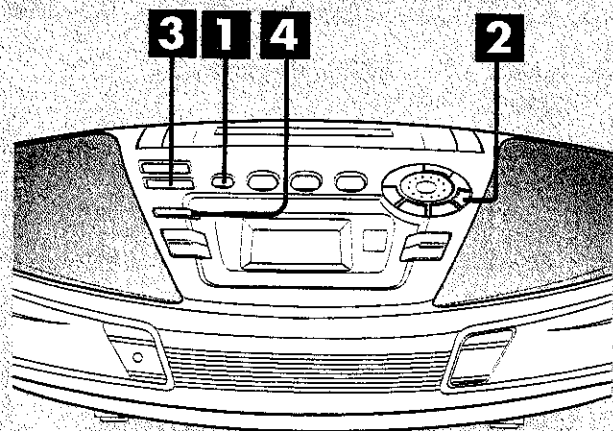
Press [TAPE/CD].

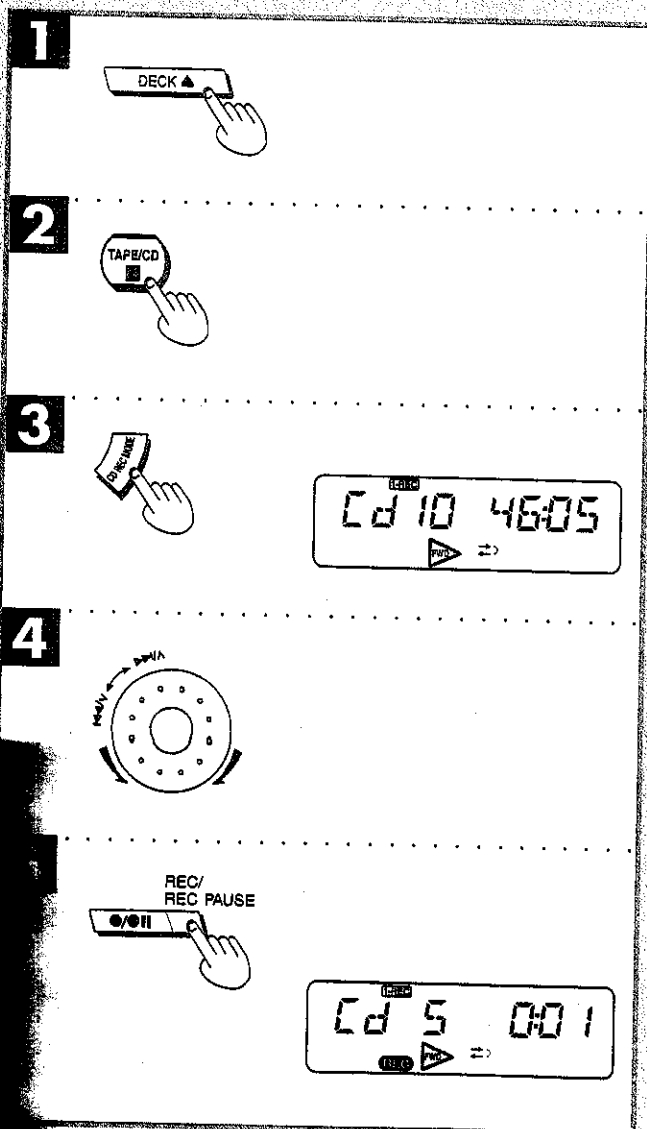
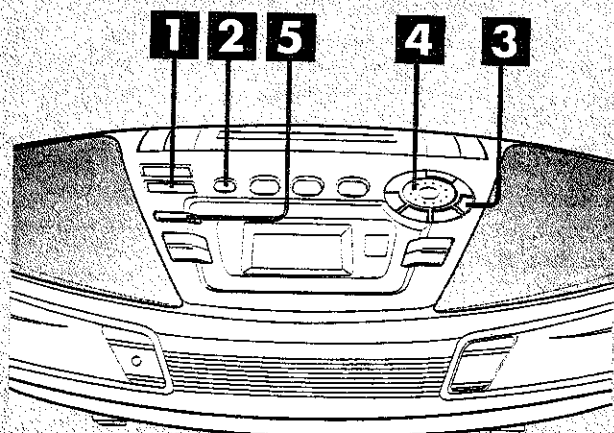
To record favourite tracks:

1. Program desired tracks (⇒ steps 2 to 4 on page 14) after step 1.
2. Continue to perform above steps 2 to 4 to start recording.

Note

- Auto CD recording cannot be used in combination with random play and repeat play (⇒ page 13).
- "C-----" is displayed if the tape required for recording exceeds 120 minutes.





Recording from CDs

One track recording (1 TRACK)

Records one track from the CD and stops. This function is convenient when recording different tracks from various CDs. Recording can begin from any place on the tape. Getting ready: Insert a CD.

- 1 Press [DECK ▲] and load the cassette with the side to be recorded facing up.

Recording direction is automatically set to begin from the side facing up (the "▶" indicator is displayed). Find the position on the tape where recording is to begin.

- 2 Press [TAPE/CD] to select the CD mode.

- 3 Press [CD REC MODE] to display "1-REC".

AUTO → 1-REC → OFF

(The display changes each time the button is pressed.)

- 4 Dial [◀/V/▶/^] to select the track to be recorded.

Omit this step when recording the first track on the CD.

- 5 Press [●/● II REC/REC PAUSE].

CD play and recording begin simultaneously. Records only one track and stops.

Reverse mode is displayed as "◀▶".

- If the track is interrupted when the end of the cassette is reached, recording automatically begins again from the beginning of the track on the opposite side (If recording was begun on the opposite side, recording stops at the end of the present side).

To continue recording with another CD:

Press [▲ CD OPEN], insert a CD and follow steps 4 and 5.

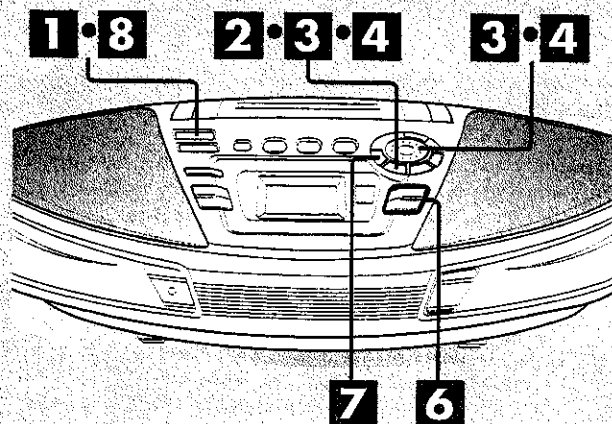
To stop recording (CD will also stop):

Press [■ TAPE/CD].

Hint

Try listening to the track to check the type of song it is before recording. Press [CD REC MODE] to display "1-REC", then press [▶/■ CD] to play the CD.

Press [●/● II REC/REC PAUSE] to record a song you like during CD play. The track is recorded from the beginning.



1

2

ON
OFF
PLAY

0:00 0:00

Start
Finish

3

ON
OFF
PLAY

7:30 0:00

ON
OFF
PLAY

7:30 7:30

4

ON
OFF
PLAY

7:30 8:30

6

7

ON
OFF
PLAY

PLAY

8

ON
OFF
PLAY

Cd 10 46:05

ON
OFF
PLAY

17:42

Flashes at programmed time

ON
OFF
PLAY

Cd 1 0:01

Using the Timer

Using the Play Timer

Select this timer when you want to use the timer as an alarm clock. You can wake up with listening to music (CD, tuner or tape) at a desired volume level and time.

The clock has a 24-hour display.

Make sure that you have completed "Setting the Clock" on page 8.

Example: Setting CD play from 7:30 to 8:30 on play timer.

Setting the start and finish times

- 1** Press [P/I] to turn the unit on.
- 2** Press [CLOCK/TIMER] twice to set "ON" and "PLAY" flashing.
They flash for about 10 seconds.

CLOCK → ON → PLAY → OFF → PLAY

Original display ← OFF → REC → ON → REC

(The display changes each time the button is pressed.)
- 3**
 - ① (Within 10 seconds) Dial [◀/V] to set the start time.
 - ② Press [CLOCK/TIMER].
Finish time flashes.
- 4**
 - ① Dial [▶/V] to set the finish time.
 - ② Press [CLOCK/TIMER].
Display returns to original mode.
When "E" is displayed:
Check whether start and finish are set for the same time.

Note

The set time remains active until changed.

Programming play

- 5** Get the music source ready.
Listening to the radio: → page 10
Listening to CDs: → page 12
Listening to cassettes: → page 15
- 6** Press VOLUME [+], [-] to adjust volume for time of play.
The volume set here remains effective even if it is changed after step 7.

Setting the timer function

- 7** Press [PLAY/REC] to display "PLAY".
Each time it is pressed:

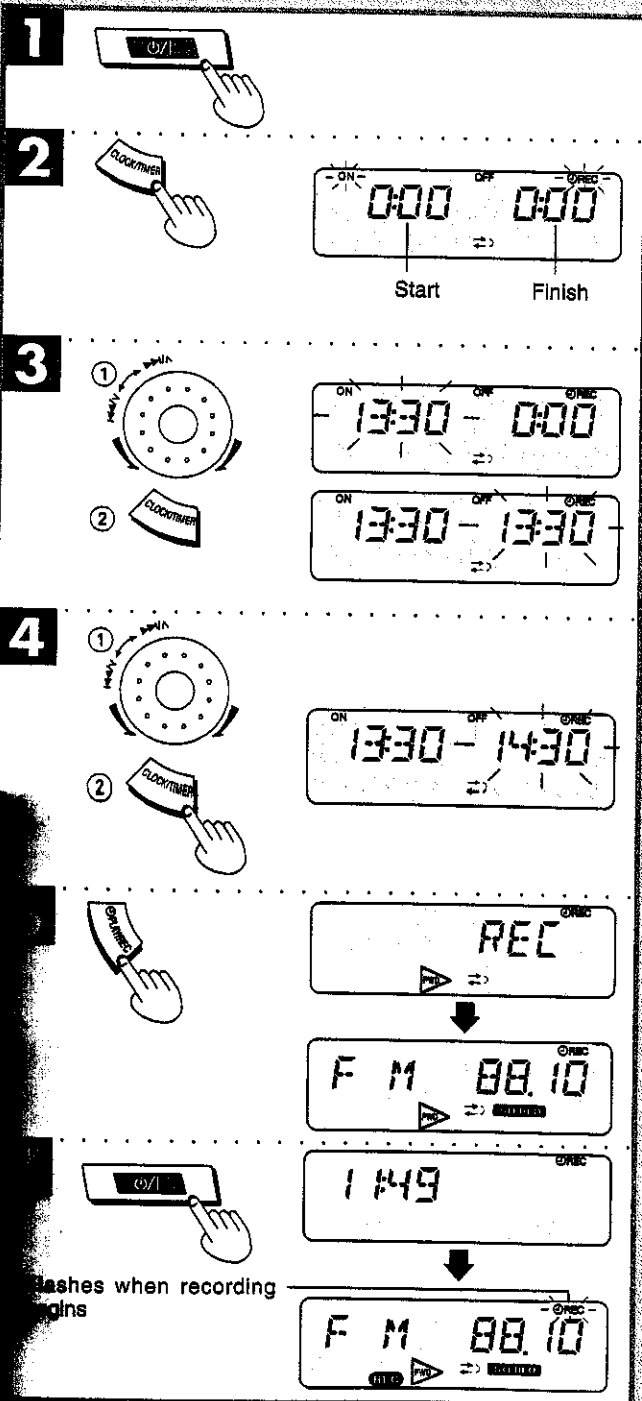
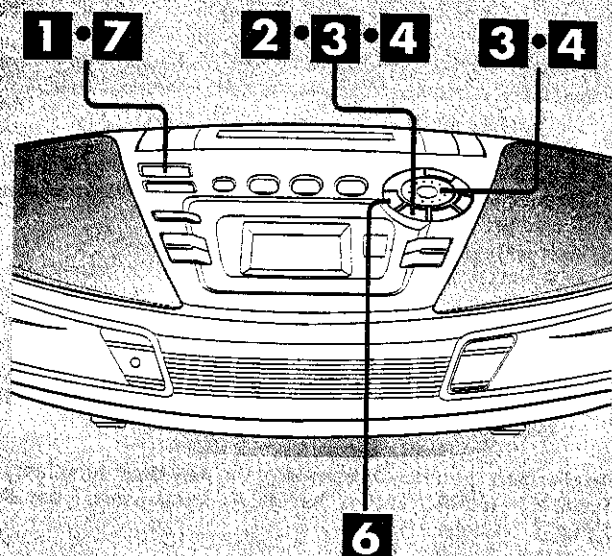
PLAY → REC → off (no display)

If the record timer has not been set
Each time it is pressed: PLAY → off (no display)
When "E" is displayed:
Check whether the clock has been set (→ page 8).

- 8** Press [P/I] to turn the unit off.
Programming can be checked when the unit is off (→ page 24).

To clear the timer function:

Press [PLAY/REC] when the unit is on to clear the "PLAY" display.



Using the Timer

Using the Recording Timer

Select this timer when you want to use the timer to record a mid-night program or while you are out.
The clock has a 24-hour display.

Make sure that you have completed "Setting the Clock" on page 8.

Example: Recording from 13:30 to 14:30

Setting the start and finish times

- 1** Press [P/I] to turn the unit on.
- 2** Press [CLOCK/TIMER] four times to set "ON" and "O REC" flashing.
They flash for about 10 seconds.
 CLOCK → ON OPLAY → OFF OPLAY →
 Original display ← OFF OREC ← ON OREC ←
 (The display changes each time the button is pressed.)
- 3** ① (Within 10 seconds)
Dial [◀/▶] to set the start time.
② Press [CLOCK/TIMER].
Finish time flashes.
- 4** ① Dial [◀/▶] to set the finish time.
② Press [CLOCK/TIMER].
Display returns to original mode.
When "E" is displayed:
Check whether start and finish are set for the same time.

Note

The set time remains active until changed.

Programming recording

- 5** Get the music source ready.
 - ① Select radio station.
 - ② Insert cassette into deck.
 - ③ Press [REV MODE] on the remote control to select the mode.
 - Reduce the volume level now if you do not wish to listen during recording.

(Available only from the remote control)

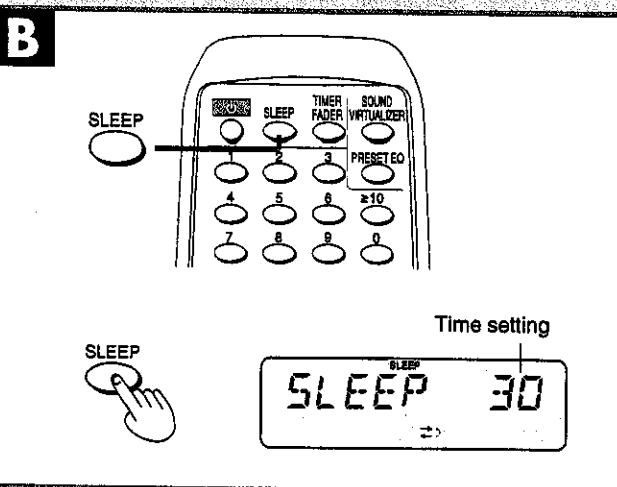
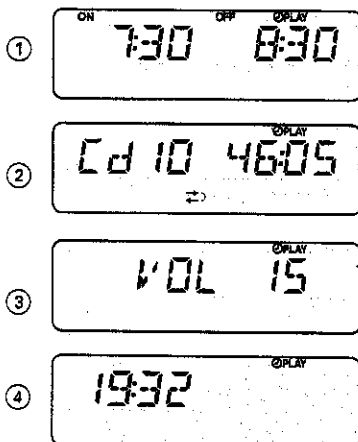
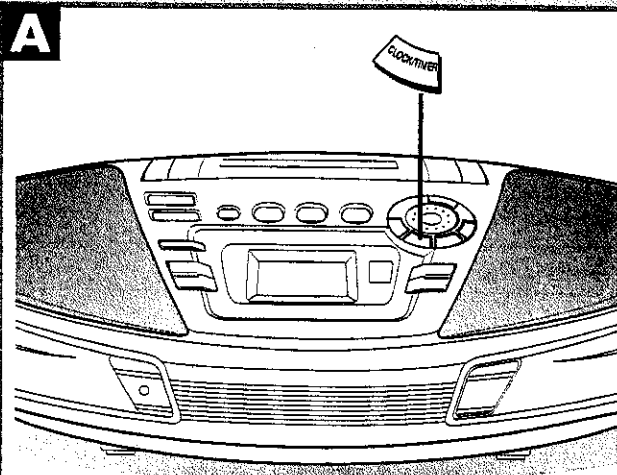
 - If there is excessive interference when recording an AM station, press [FM MODE/BP] to select "bP1" or "bP2" which ever yields less noise.

Setting the timer function

- 6** Press [OPLAY/REC] to display "O REC".
Each time it is pressed: OPLAY → OREC → off (no display)
 If the play timer has not been set
 Each time it is pressed: OREC ↔ off (no display)
 When "E" is displayed:
 Check whether the clock has been set (→ page 8).
- 7** Press [P/I] to turn the unit off.
Programming can be checked when the unit is off (→ page 24).
The unit turns on approximately 30 seconds before the set start time and recording begins.

To clear the timer function:

Press [OPLAY/REC] when the unit is on to clear the "O REC" indicator.



Using the Timer

Using the Play/Recording Timer

To play music after programming:

- ① Begin playing of desired music source. Programming for the play/record time remains in the memory even if the volume or source is changed during play.
- ② After playing music, turn the unit off.
 - Direction displayed when unit is turned off is activated in the play/recording timer. After playing music, check the direction ("▶" or "◀") of the cassette to be played or recorded before turning the unit off.
 - When using the play timer with a CD, check the setting of the random, repeat or programmed play mode before turning the unit off.

To change the source or volume of the play timer function:

Press [PLAY/REC] to clear the "PLAY" indicator and follow steps 5 to 8. (→ page 22)

To change the radio station to be recorded:

Press [PLAY/REC] to clear the "REC" indicator and follow steps 5 to 7. (→ page 23)

To use the timer at the same time daily:

Check that "PLAY" or "REC" is displayed and turn the unit off.

Note

Always turn the unit off before the programmed start time. The timer does not activate if unit is on.

To check programming

Press [CLOCK/TIMER] when unit is off.

The display automatically changes in the following order.

Display example: Play CD from 7:30 to 8:30 on play timer. A

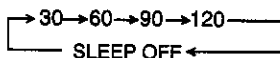
- ① Programmed time
- ② Programmed music source
- ③ Timer volume
- ④ Original display

Using the Sleep Timer

(Only from the remote control)

The unit off time can be set up to two hours ahead of the present time. It lets you fall asleep while listening to music.

Press [SLEEP] to select the desired time. B



(The display changes each time the button is pressed.)

The unit is turned off after the set time has elapsed.

To release the timer function:

Press [SLEEP] to select "SLEEP OFF".

To check the time remaining during operation:

Press [SLEEP].

To change the time remaining during operation:

Press [SLEEP] to show the remaining time then press [SLEEP] to select the desired time.

(Continued on next page)

Using the Timer

Using the sleep timer

Using the sleep and play timers in combination

Example: Falling asleep listening to FM programming and waking up the next morning listening to a CD. A

1. Program the play timer for CD play (→ page 22).
2. Select the desired radio station and set the sleep timer.
Play starts at the set volume even if it was reduced after setting the timer.

• When programmed times overlap B

When play is programmed to begin before the sleep timer turns the unit off, the play timer is not activated. The unit turns off after the programmed sleep timer is completed. Always set the sleep timer so that the unit turns off by the time the play timer is programmed to begin.

Using the sleep and recording timers in combination

Example: Falling asleep listening to a CD and recording FM programming during the night. C

1. Program the recording timer to record the FM programming and insert recording cassette into deck (→ page 23).
2. Insert the CD and set the sleep timer.

• When programmed times overlap D

When recording is programmed to begin before the sleep timer turns the unit off, the recording timer is not activated. The unit turns off after the programmed sleep timer is completed. Always set the sleep timer so that the unit turns off by the time the recording timer is programmed to begin.

Note

The play and recording timers cannot be used together.

Using the timer fader function (Timer Fader)

(Only from the remote control)

• Using timer fader and sleep timer in combination

Volume will decrease slowly with time till power is turned off at the end of sleep.

Select this function to provide much comfortable sleep when listening to tape, CD or radio with sleep mode.

• Using timer fader and play timer in combination

Volume will increase from 0 to last set volume level gradually.

Select this function to provide a more comfortable wake up when using the play timer as an alarm.

Press [TIMER FADER] to indicate "FADER". E

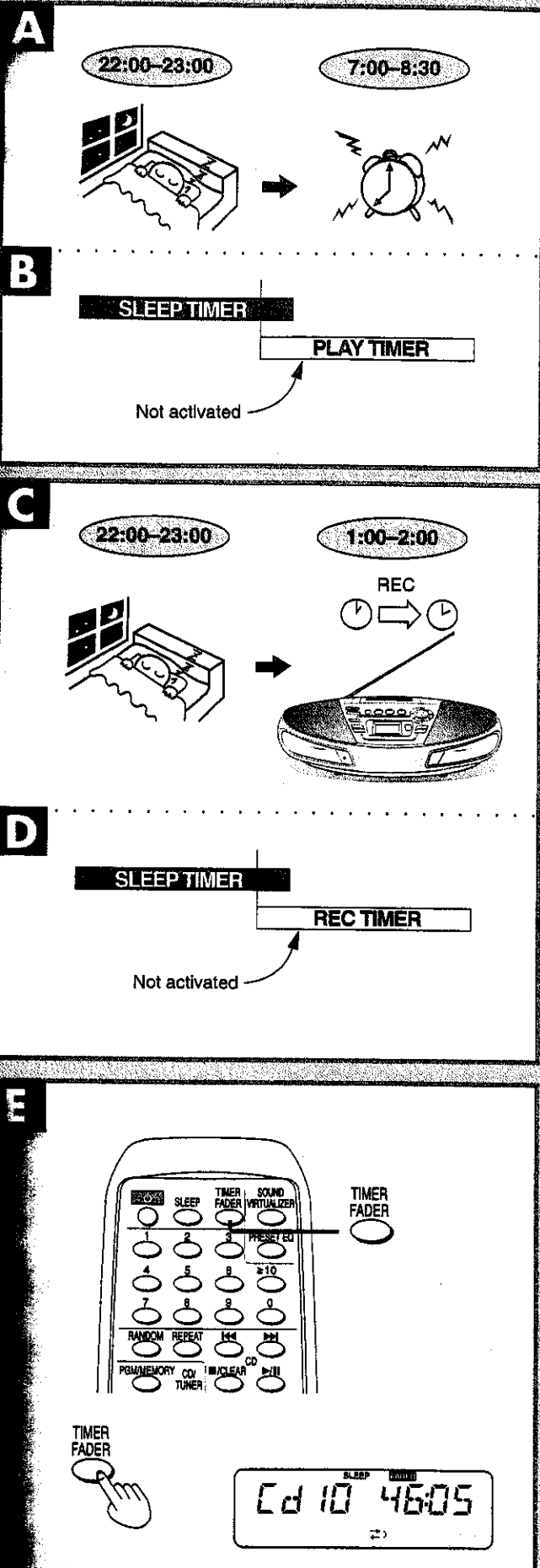
To cancel the TIMER FADER function:

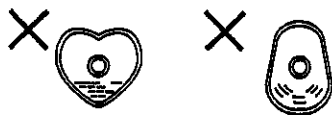
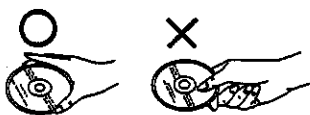
Press [TIMER FADER] again to cancel.

"FADER" goes off.

Note

- All timer functions are affected while "FADER" is displayed.
- Timer fader mode works everyday as long as "FADER" is displayed.
- If record timer is used, there will be no effect to the recording.

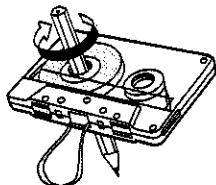
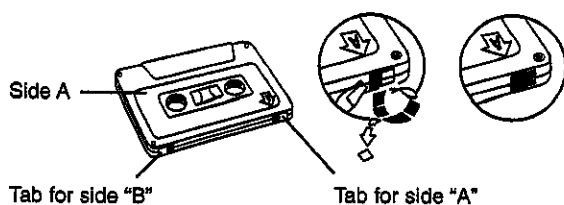


A**B****How to hold CDs**

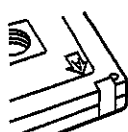
Do not touch the recorded surface.

C**How to clean CDs**

Wipe from inside outward.

D**How to take up tape slack****E****To protect tapes against further recording****To re-record**

Normal position tape



Hi-position tape



Detection hole

Concerning compact discs

With this player, you can play compact discs having this mark. However, do not use irregular shape CDs. CDs of the sort can damage the unit. **A**

COMPACT
disc
DIGITAL AUDIO

Handling precautions

Handle CDs as shown on the left (**B** - **C**).

- If you are taking the disc from a cold to a warm environment, moisture may form on the disc. Wipe this off with a soft, dry, lintfree cloth before using the disc.
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not attach labels or stickers to CDs. (Do not use CDs with exposed adhesive from tape or left over peeled off stickers.)
- Do not use scratch-proof protectors or covers other than those specified for use with this system.

Storage precautions

Be sure to store discs in their cases to protect them from dust, scratches, and warping.

Do not place or store discs in the following places

- Locations exposed to direct sunlight
- Humid or dusty locations
- Locations directly exposed to a heat vent or heating appliance
- In the glove compartment or on the rear deck of an automobile

Concerning cassette tapes**Selection of cassette tapes**

Tapes can get caught on the capstans. Use caution with the following types of tapes.

Cassette tapes exceeding 100 minutes

Tapes are made of a thin film material. Do not repeatedly advance and stop the tape, fast-forward it or rewind it.

Endless-tapes

For this unit, it is recommended to use the tape which is appropriate to the auto reverse mechanism.

Always read the instructions provided with your tapes.

Tape slack **D**

Tape slack may cause the tape to break. Use a pencil or similar object to take up the slack.

Erasure prevention **E**

Use a screwdriver or similar object to break out the tab.

To re-record on a protected cassette

Cover the hole with adhesive tape. Do not cover the detection hole on hi-position tapes.

Storage precautions

Do not place or store tapes in the following places:

- In high temperature (35°C or higher) or high humidity (80% or higher) areas.
- In a strong magnetic field (near a speaker, on top of a TV, etc.) This can erase a recording.
- Locations exposed to direct sunlight.

Troubleshooting Guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or minor adjustment on your part may eliminate the problem and restore proper operation.
If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

Problem	Probable cause (s)	Suggested remedy	Page
Common problems			
"E" appears.	Have you made an incorrect operation?	Read the operating instructions and try again.	/
"U01" appears.	Are the batteries flat?	Replace them with new ones. Alternatively use a household AC outlet as the power source.	5
"U02" appears.	Power is not supplied to the unit.	Install the batteries or connect the power cord.	5
Preset channels, timer functions, and clock are cleared.	Did you unplug the unit without inserting memory batteries?	Insert memory batteries.	5
While listening to CDs			
Play does not start. No display of track numbers etc.	Has the CD been installed upside down?	Install the CD with the label side facing up.	12
	Has there been a sudden change in temperature? For instance, was the unit brought straight from a cold place into a warm location?	Condensation may have formed on the lens unit. Leave it for about an hour before attempting operation again.	/
Certain sections are not played properly.	Is the CD soiled?	Wipe with a soft cloth.	26
	Is the CD scratched?	Replace with a new CD.	/
While listening to tapes			
No recording.	Have the tape's accidental erasure prevention tabs been broken out?	Cover the holes with adhesive tape.	26
Poor quality sound.	Are the heads soiled?	Clean them.	Back cover
While listening to the radio			
Stations cannot be tuned in well.	Has the antenna been adjusted properly?	Try changing its direction.	10
Noise heard during AM reception.	Are you using a remote control of other appliances near the unit?	Use the remote control at a distance.	/
	Are you operating the unit and a TV set at the same time?	Place the unit at a distance from the TV. Alternatively turn the TV off.	/
While using the timer			
Timer operation at the programmed time.	Is the unit turned on (when the play timer and the recording timer are being used)?	Turn the unit off upon completion of the settings.	22, 23
	Is the programmed timer indicator (ⓈPLAY, ⓈREC or SLEEP) on?	Operate again so the indicator lights.	22-24

Technical Specifications

Radio

Frequency range

FM

87.50-108.00 MHz (50 kHz steps)

AM

522-1629 kHz (9 kHz steps)

CD player

Sampling frequency

44.1 kHz

Decoding

16 bit linear

Beam source

Semiconductor laser (wavelength 780 nm)

No. of channels

2 channel, stereo

Wow and flutter

Below measurable limit

D/A converter

MASH (1 bit DAC)

Tape recorder

Track system

4 track, 2 channel, stereo

Monitor system

Variable sound monitor

Recording system

AC bias

Erasing system

AC erase

Frequency range

Normal position

50-12000 Hz

High position

50-13000 Hz

General

Speakers

8 cm 5.4 Ω x 2

Jacks

Output

PHONES: 3.5 mm stereo (16-32 Ω)

Power requirement

AC

230-240 V, 50 Hz

Battery

Power consumption: 30 W

12 V [Eight R20/LR20(D, UM-1) batteries]

•Do not use rechargeable type batteries.

Memory back-up for computer/clock

6 V [Four R6/LR6 (AA, UM-3) batteries]

•Do not use rechargeable type batteries.

Dimensions (WxHxD)

521 x 146 x 270 mm

Weight

4.4 kg without batteries

Note

Specifications are subject to change without notice.

Weight and dimensions are approximate.

Maintenance

If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.

If the surfaces are extremely dirty, use a soft cloth dipped in a soap-and-water solution or a weak detergent solution.

- Never use alcohol, paint thinner or benzine to clean this unit.
- Before using chemically impregnated cloth, read the instructions that came with the cloth carefully.

For a cleaner crisper sound

We recommend that you periodically clean parts (the shaded portion in the figure below) the tape contacts like the heads.

Do not use any solution other than alcohol for head cleaning.

